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ORIGINAL ARTICLES.

VILLAGE AND EMERGENCY HOSPITALS.

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IN the United States, rural hospitals are comparatively unknown, while in English country life they are taking quite a prominent place. In 1870 there were not less than sixty "Cottage Hospitals" scattered through the British Isles. Of their need in this country, Dr. George Derby, in his report to the Massachusetts State Board of Health in 1874, says: "There are many reasons for believing that, at the present time, small and well-arranged hospitals in at least twenty of our busy towns would be the means of saving life and of preventing useless suffering to both the sick and the well." It is believed that a small hospital would be a blessing in every community of a population of 2500 or more. "It would furnish a means for the treatment of various classes of patients; for instance, those who cannot be properly cared for in their homes, a very large and growing part of the population, and cases of accidents requiring immediate treatment, or operation, and subsequent skilled attendance and nursing." They would also be of value in cases of outbreaks of epidemics of contagious diseases, as smallpox, diphtheria, scarlet fever, etc., and would offer an easy means of early stamping out these diseases. "The country practitioner, with such means at hand, and aided by trained nurses, when needed, would have the advantages now enjoyed only by metropolitan physicians, and would be enabled to keep his patient under his eye, within easy distance of his own house. The patient too, would have the familiar faces of friends and neighbors about him, and could breathe his own pure country air," the last a matter of no small importance.

"It is not intended that these village or cottage hospitals should imitate in any way the form or detail of a general hospital, with its wards, nurse rooms, etc. A plain country house, of moderate size, possessing the advantages of a healthy situation, with a southern exposure, plenty of sunlight, good drainage, and a reasonable amount of ventilation, will answer all the purposes of a village hospital." And as a form of beneficence as yet practically unknown among us, it is suggested to those looking about for means whereby to benefit their fellow-men, that the gift of such a building as is here described for a hospital would be a great blessing to every rural community. One or two beds per 1000 of population are all that would be generally required, five or six beds being ample for small country towns.

The objects of a good hospital, according to Dr. Edward Hutchinson, are "To care for the sick better than they can be provided for in their own homes; to cure sick people at the least expense; to have a convenient administration, so that a few physicians and nurses can do the work; to give those suffering from surgical operations the best chances for recovery with life and limb; to care for the poor who cannot afford the things necessary for their own comfort; that childbed cases may be secluded and not exposed to dangerous influences by contagion, whether by physician, nurse, or location; to have provisions for the contagious diseases of childhood, as well as for those of adult life, so that the mortality may not be increased by the aggregation of the sick."

THE LOCATION OF THE HOSPITAL.

Places for the treatment of the sick should always have a healthful location. For a village hospital, a warm, dry hillside, facing the south, will be the best. Dr. Francis E. Brown says: "The site should be elevated; on a good, porous, gravelly or sandy soil; not on new-made land, nor on a clayey or retentive soil; where abundant means are offered for effective drainage; never in a crowded locality, but in a situation which is open to healthful winds, and has a fine exposure to sunlight. The building should be so situated that the prevalent winds may not pass over marshes or regions infected by dampness or malarial influences, or in the neighborhood of large sewers. Particular attention should be given to the slope of the land in the neighborhood. A valley or depression should be avoided, as well as a situation under a steep hill, or on a slope which would collect water or dampness, or where the air would have a tendency to become stagnant. No site should be chosen, however accessible, which will not give at all times, the utmost purity of atmosphere." Hennen says on the location of hospitals: "That building makes the best hospital which is situated high, dry, and detached; in which there are sufficient doors and windows admitting of cross-ventilation; with open fireplaces and secure roofs

and walls; with rooms of easy access, lofty, and of moderate size."

MATERIALS OF CONSTRUCTION.

Stone, brick and wood have all been used in the construction of hospital walls. In the past, vast sums have been expended in erecting imposing architectural piles.[1] The views of the foremost sanitarians of the present time favor the erection of temporary structures for hospital purposes. Dr. Woodworth says: "The old magnificent hospitals, built as monuments for all time, will be abandoned for the simple structure of indefinite existence, and the only strictly permanent parts of the modern hospital will be the executive building, the kitchen, laundry, and engine-house." Dr. J. S. Billings says: "I believe that no hospital should be constructed with a view to its being in use more than fifteen years. If the money required to put up such structures as the New York civil hospitals, the Rhode Island hospital, or the Cincinnati hospital, were divided into two equal parts, one half being used to erect frame hospitals of the same capacity as the old brick hospitals actually built, the other half being put at interest at six per cent., a complete new hospital could be furnished every twelve years for an indefinite period."

The reason for preferring these temporary structures is that it has been found that old hospital buildings become so saturated with the germs of disease and with the exhalations from the bodies of the patients, that finally they infect the patients. Galton in his work on hospital construction has written: "Do not build for a long futurity. Buildings used for the reception of the sick become permeated with organic impurities, and it is a real sanitary advantage that they should be pulled down and entirely rebuilt on a fresh site periodically."

It would seem, then, that buildings of frame would be most desirable for village hospitals. They should be substantially built, with wards to contain not more than from 12 to 20 patients. The smaller the wards, the more nurses will be required.

In Europe, "pavilion" hospitals, constructed of wood, with walls of heavy canvas, have been extensively used. These structures are as substantial as frame buildings, and at the same time offer all the advantages of tents. In cold weather, the walls are readily made of double thickness of muslin.

SUMMER AND EMERGENCY HOSPITALS.

In the summer months, and in cases of emergencies, Dr. J. S. Billings recommends the United States hospital tents, which will accommodate 25 patients. It would be well for Boards of Health and all places without hospital accommodations to have on hand a number of these or smaller tents, for use on demand for cases of smallpox, typhus fever, and similar contagious diseases. They might be used for these cases even when a more permanent hospital was possessed by a community. Cowles in his "Treatment of the Sick in Tents," remarks: "It must readily be seen how simple and easy a thing it is to provide good hospital accommodations in any emergency—no matter how sudden and unexpected—that the prevalence of epidemic and infectious diseases may occasion." Of tent hospitals Dr. F. H. Brown writes: "The more nearly patients are brought to the condition of being treated in the open air, the more quickly and surely will they recover. The wooden barrack and the hut are good, but in many cases the tent is better. As adjuncts, at least, to the hospital, we should look to the tents in our hospital yards in the warmer season as the most suitable places in which to treat the gravest wounds and many of the severer forms of disease." Such tent hospitals have been used for years, with success, at Berlin, Vienna, Leipzig, Dresden, Frankfort, and other European cities.

THE CONSTRUCTION OF HOSPITALS.

Dr. Hutchinson tersely enumerates the points to be borne in mind in the construction of hospitals.

Arrange the wards so that no sick person will endanger another.

Have a plentiful supply of pure air, with provision for the escape of the foul air.

Supply at least 1200 cubic feet of air for each bed.

Separate the sexes, and also medical, surgical, and childbed cases.

Make provision for isolating contagious diseases.

Have a bountiful supply of pure water.

Have all the drains go entirely outside of the buildings.

The wards should be so arranged that they may have the greatest possible exposure to the sun.

Separate the convalescents from those confined to bed—during the day, at least.

Have the wards on one floor, and but one story high.

Delirium tremens, accident, and insane patients, should have apartments at such a distance from the wards that they may not disturb the rest of the sick.

There should be small wards to isolate troublesome patients, and for those who are easily disturbed.

The kitchen and laundry should be separate from the wards, so that the odors of washing and cooking cannot reach the sick.

[1] The Marine Hospital at San Francisco cost $238,871; that at Boston $394,047; that at Chicago $422,107; and that at New Orleans over $600,000. These were built on the old plan. The new Marine Hospital at San Francisco cost but $58,789.

Water-closets and slop-sinks should be away from the wards, and have separate ventilation.

The nurse's room should overlook the ward.

There should always be a high and airy situation; a cheerful view; indoor promenade; extensive grounds for exercise; flower gardens and lawn.

Have no cellars under the wards.

Have hard, unabsorbing surfaces for walls and ceilings.

Let the floors be oiled or painted, so that they will not absorb water.

The wards should be so far distant from each other that the air may circulate freely.

The corridors connecting the wards should be open beneath, and provided with glass windows, to slide open, to allow the air to blow under and through them.

Have open fireplaces in the wards, to assist ventilation and to supplement the heating apparatus.

Have two steam-boilers, for fear of accident.

The administration building ought to be distinct from, yet attached to, the wards.

The heating, washing, drying, and cooking should be done by steam.

Have such an arrangement of the wards that any one of them can be disinfected, or even torn down, without disturbing the general administration.

The windows should be numerous and large, extending from near the ceiling to within two feet of the floor.

The earth-closet is recommended for rural hospitals.

Heating and Ventilation.—When tents and temporary sheds are used as emergency hospitals, and artificial heat is needed, dependence must be placed upon stoves. Wood fires will be found to be preferable to those of coal, as throwing off less of unpleasant and unhealthful gases. In "cottage hospitals" every ward should have its own "open" fireplace. In these, on cool days, in spring and autumn, cheerful fires of wood may be built to remove all feeling of chilliness from the room. The glowing fire of wood will prove a curative in many cases, while the open fireplace will at all times be an excellent means of ventilation. For the winter season hot-air furnaces placed in the cellar are recommended, as by this means one fire will warm the whole building, and besides the warmed air entering the room will displace an equal volume of fouled air, and thus act as a means of ventilation. In the case of the erection of a new hospital, we would advise that some of the patented systems of ventilation now in general use in public buildings, as the "Davis," "Smead and Wills" systems, be carefully examined.

In any permanent rural hospital the building should be heated the whole winter, whether there be patients in it or not. Otherwise, the building would become cold, and damp, and unfit for use in any emergency which might arise. Probably this would best be secured by having a competent man and woman reside in the hospital—the man to act as steward and the woman as matron, and both as nurses in emergencies. As has already been said, the more thoroughly the patient is in the open air the better will be his chances of recovery. Hence the value of tent hospitals. If the death-rate has been enormous in the absence of any attempt at ventilation, these rates have been reduced one-third, and even more than one-half, when efficient means of ventilation have been introduced.

Foul air can kill as well as disease, and it can kill a sick man more easily than one who is well. Dr. Wylie, in his work on hospital construction, says that each patient requires about 124 square feet of floor-surface, with 1800 cubic feet of air-space, and this air should be changed every hour, but in contagious diseases two or three times an hour. In village hospitals the open fireplace is urged as the first means of ventilation. This must be kept open summer and winter, and in cases of contagious diseases a fire should be kept burning in it. Next, window-sashes should move freely, and may be left open an inch at both top and bottom. Third, except in extreme cases, each ward should be opened a portion of each day for a complete airing, and lastly, a patented system of heating and ventilation may be introduced. It should be remembered that while there is ventilation going on in connection with heating in open fireplaces, stoves, and hot-air furnaces, there is no ventilation whatever in connection with the steam and hot-water heating as ordinarily arranged. *Rooms heated with steam or hot-water pipes must be ventilated.* If openings are made in the ceiling, much foul air will pass off in this way, but in such a case the space under the roof must be freely open to the external air, else the circulation, and hence the removal of foul air, will be small. If air-shafts are used in ventilators, there will then be no upward movement of air in them. There should be openings at both top and bottom of a room into these shafts. As generally built, ventilating shafts are valueless. *In all efforts at ventilation we must remember that cold draughts must be avoided.* While foul air kills, draughts of cold air may kill as with a two-edged sword.

ADMINISTRATION.

Under a Board of Trustees, if an endowed institution, or a Sanitary Committee, if supported by the town, there should be a *physician in charge.* He should, under the Trustees, have personal control of the hospital. He should order all supplies, have control of the nurses, should keep a record of the

admission and discharge of all patients, with a history of their treatment. He should make a weekly or monthly report to the authorities appointing him. This plan should be followed in emergency hospitals for contagious diseases.

In permanent cottage hospitals another plan of administration has been supported. Full control of the hospital rests in a Board of Trustees or in the Sanitary Committee. All physicians in the district are free to bring their patients to the hospital for treatment, and to treat them there. A man and his wife, discreet persons, are selected to act as steward and matron, and also as nurses. These persons should reside in the hospital, and have it ready at all times for the reception of patients. Under the Trustees they should have full charge of all the property in the hospital. The steward should be required to keep the hospital premises scrupulously clean at all times. He should see that additional nurses that may be employed properly perform all of their duties. He should supervise the disinfection of clothing, bedding, etc. He should see that before leaving the hospital every patient receives a change of non-infected clothing, and takes a full bath in warm water. He should, under orders of the Board of Trustees, control the admission of visitors to the hospital. He should treat all patients with civility and kindness, and see that all the other nurses are kind and patient. No cruelty, insolence, or neglect should be tolerated. He should not permit intoxicating liquors or foods to be given to patients, except as directed by the physician in charge of each case. He should see that nurses carry out the orders of the physicians. He should report to the Board all the needs of the hospital from time to time.

The matron should see that each patient has the diet prescribed, properly prepared, and at the stated hours. She should have charge of the bedding, and such wearing apparel as may be provided for the patients. She should have general supervision of the laundry, and should see that cleanliness is maintained throughout the hospital. She should have charge of the table for the steward and nurses, and other employés of the hospital, and with the steward should have control of the nurses and servants.

Charges.—Each patient shall be charged for board and attendance, at such rates as may be determined by the Board of Trustees.

The Etiology of Fibrinous Rhinitis.—At a recent meeting of the Medical Society of Greifswald, ABEL (*Deutsche medicin. Wochenschr.*, Jahrg. xix, No. 15, p. 359) reported a case of fibrinous rhinitis in which careful microscopic and cultural examination failed to disclose in the membrane the presence of diphtheria-bacilli. On the other hand, pneumonia-cocci of diminished virulence were found in large numbers, disappearing toward the close of the disease.

THE GERMICIDAL PROPERTIES OF NUCLEINS.

A Preliminary Contribution from the Laboratory of Hygiene of Michigan University.

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IN studying the subject of immunity we have been led to test the action of certain constituents of the cell upon the life and growth of microörganisms, because it has seemed to us that the cells of the animal body must be concerned in the production of immunity, and in a way not explained by the phagocytic theory of Metschnikoff.

Immunity may be natural or acquired. Natural immunity may be peculiar to the race or to the individual. An example of racial immunity is that of the domestic fowl to anthrax. The chick, even at the moment when it comes from the egg, is immune to the most virulent cultures of the bacillus anthracis. It is true that this animal may be made susceptible to this disease, but this is an artificially induced susceptibility, and the immunity is natural to every period of life. Another example of racial immunity is that of the frog to the same disease, and here again an artificial susceptibility may be induced. Racial immunity must be inherent in the parent cell.

The natural immunity which is peculiar to the individual usually comes with adult life. The young are susceptible to a given disease, but adults of the same species lose this susceptibility, and become immune. Examples of this are common. The young rat is susceptible to anthrax, while the adult is naturally immune, but can be rendered susceptible by reducing the vital strength. The child is highly susceptible to scarlet-fever and diphtheria, while the adult, though not wholly immune to these diseases, loses much in susceptibility, and is likely to become infected only when much reduced in vitality, or when exposed to the prolonged influence of the infecting agent. The only reasonable explanation of this immunity is that it is inherent in the parent cell, and comes as naturally as the changes in form and voice at puberty, or as the growth of the beard in early manhood. The evolution of the condition of immunity in these cases is due to natural development of the functions of certain cells of the body.

In selecting the constituent of the cell upon which we could begin our studies, the nucleins, constituting as they do the most complex part and possessing marked physiologic properties, naturally suggested themselves. We will not in this paper discuss the chemistry of the nucleins any farther than to say that they consist of nucleic acids combined with a complex proteid base. It is more than probable that nucleins from diverse sources differ in

both their acids and bases. The nucleins are not digested by hydrochloric acid and pepsin, and this affords in many cases a means for their isolation.

Nuclein from dog's testes. The testicles of two small dogs were stripped of their investing membranes, and were digested for some days (until the supernatant fluid failed to respond to the biuret test for peptones) at 40° C., with pepsin and 0.2 per cent. hydrochloric acid. The undigested portion was collected on filter-paper, and washed first with dilute hydrochloric acid, then with alcohol. Finally, it was dissolved in a 0.5 per cent. solution of potassium hydrate, and filtered through a Chamberland filter without pressure.

This solution is clear, golden-yellow, and feebly alkaline. On the addition of a drop of nitric acid a white precipitate forms, and dissolves colorless in the cold on the further addition of the acid. The nuclein solution does not give the biuret reaction, but does respond to the Millon test.

With this solution the following experiments have been made in order to test its germicidal effect.

The solution of testicular nuclein was diluted with seven volumes of physiologic salt-solution. This reduced the alkali to 0.0625 per cent., an amount too small to have itself any germicidal effect.

One tube of this solution was inoculated with a loop of a beef-tea culture of the staphylococcus pyogenes aureus, and plates were made after 5 min., 4 hrs., 6 hrs., 23 hrs., and 54 hrs. The number of colonies on each plate was as follows:

Time	5 min.	4 hrs.	6 hrs.	23 hrs.	54 hrs.
No. of colonies	10	0	0	0	0

Another tube was inoculated with a loop of a beef-tea culture of bacillus venenosus, and plates were made, with the following results:

Time	5 min.	4 hrs.	6 hrs.
No. of colonies	210	8	9

Another portion of the testicular nuclein solution was diluted with four parts of the physiologic salt-solution. This reduced the alkalinity to 0.10 per cent. (water containing 0.5 per cent. of potassium hydrate failed to destroy this culture of the aureus after twenty-four hours' exposure). To a tube of this a loop of a beef-tea culture of the aureus was added. The plates showed the following:

Time	5 min.	1 hr.	2 hrs.	14 hrs.	23 hrs.
No. of colonies	250	0	0	0	0

In another, in which the same dilution and the same germ were used, the number of colonies was as follows:

Time .	Immediately.	20 min.	1 hr.	2 hrs.	17 hrs.	24 hrs.
No. of colonies	680	0	0	0	0	0

In still another experiment, in which the same dilution of the testicular nuclein was used with the anthrax-bacillus (without spores), the colonies numbered as follows:

Time .	Immediately.	20 min.	1 hr.	2 hrs.	17 hrs.	24 hrs.
No. of colonies	45	0	0	0	0	0

With nuclein obtained from the testes of a rat and diluted with physiologic salt-solution until the amount of alkali was reduced to 0.06 per cent., one experiment with aureus gave the following results:

Time . .	Immediately.	5 min.	1 hr.	2 hrs.	27 hrs.
No. of colonies	1110	0	0	0	0

Nuclein from thyroid gland. We took the thyroid gland of a rabbit, killed by drawing the blood from the carotid, cut the gland into fine pieces, extracted with alcohol and ether, then placed the extract in 0.2 per cent. hydrochloric acid with pepsin, and kept it in the incubator at 40 C. for two days, having decanted and renewed the digestive fluid several times. The slight glanular residue which remained undigested was collected upon a filter, and washed with 0.2 per cent. hydrochloric acid until the washings failed to give the biuret reaction. After this treatment there appeared on the filter glistening scales which, under the microscope, showed bundles of radiating needles. These proved to be fat, and were dissolved by washing with alcohol and ether. The residue now on the paper was exceedingly small. This was dissolved in 5 c.c. of a 0.25 per cent. potassium hydrate solution, diluted with an equal volume of physiologic salt-solution, and with this the experiments were made.

This solution gave a faint opalescence on the addition of nitric acid. It did not color on heating with nitric acid, but did become markedly yellow on the further addition of ammonia. It failed to respond to the biuret test.

This solution was inoculated with a loop of a beef-tea culture of the aureus, and the plates showed the following number of colonies:

Time . . .	Immediately.	10 min.	1 hr.	18 hrs.
No. of colonies	805	830	256	0

Nuclein from yeast-cells. Yeast-cells, after having been washed with water by decantation, were extracted with dilute alkali. The alkaline solution was precipitated with dilute acid, and this process repeated a number of times. The solution, as kept for use, was made by dissolving the nuclein in 0.25 per cent. alkali. That the nuclein in this solution is not free from albuminous bodies is shown by the fact that it responds promptly to the biuret, xanthoproteic, and Millon tests. However, this solution has stood in an ordinary glass-stoppered bottle, which is frequently opened for nearly five months, and remains germ-free.

The amount of nuclein (impure) in this solution is nine milligrams per cubic centimeter. With this solution the following experiments were made:

Two parts of the yeast nuclein solution were diluted with three parts of the physiologic salt-solution, and this was inoculated with a loop of a beef-tea solution of the aureus. Plates made showed the following results:

Time	5 min.	1 hr.	2 hrs.	14 hrs.	23 hrs.
No. of colonies	1110	0	0	0	0

The same experiment repeated gave the following:

Time	5 min.	1 hr.	2 hrs.	14 hrs.	23 hrs.
No. of colonies	1490	20	0	0	0

In one, with the staphylococcus pyogenes albus, the following are the figures:

Time . .	Immediately.	20 min.	1 hr.	2 hrs.	17 hrs.	24 hrs.
No. of colonies	680	0	0	0	0	0

In one, with the bacillus anthracis:

Time .	Immediately.	20 min.	1 hr.	2 hrs.	17 hrs.	24 hrs.
No. of colonies	45	0	0	0	0	0

During the past year we have also tested the effects of injections of nuclein upon the progress of certain infectious diseases. Moreover, we have some evidence that the germicidal constituent of blood-serum belongs to the nucleins. This work, however, we wish to confirm before publishing.

PERIODIC INSANITY, IN WHICH THE EXCITING CAUSE APPEARS TO BE THE MENSTRUAL FUNCTION—REPORT OF A TYPICAL CASE.

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THE subject of periodic insanity, as related to the menstrual function, is one about which the conservative physician and alienist naturally pauses before placing himself upon record. In this age, when gynecology has apparently gone wild, and the gynecologist is prone to trace every disease, about the etiology and pathology of which there is the slightest doubt, to the uterus, the ovaries, and the tubes, we, who owe so much to the womb, the resting-place of our early existence, are pained to divert the attention of our earnest scientific brethren from the old homestead and the adjacent premises; we would emphasize our belief in the existence of special organisms and specific agencies as factors in the causation of diseases that they have always traced to some functional derangement or lesion of the generative organs and for which their *sine qua non* is the removal of the ovaries. On the other hand, we hesitate to lend our indorsement to what may seem to invite these specialists to extend their domain or give broader scope to their scalpel and hemostatic forceps.

While I think it injudicious, to say the least, to indorse abdominal section in insane patients, upon the pretext of giving them rest, skilful nursing, and more nutritious diet, or for the removal of ovaries with a slight adhesion, a congested tube, a small cyst, etc., yet I do hold that there are cases, in which a careful examination reveals no pathologic lesion whatever as existing in any of the internal generative organs, that nevertheless justify the removal of the ovaries, because the presence of these organs means the continuance of a function that acts as an exciting cause in the production of symptoms and conditions disastrous to the patient. I have selected one case that I consider a typical one; space in a paper of this kind forbids my relating more, though I have the records of large numbers at my command. Taking the following case as a representative one, from it we will draw our conclusions:

Miss S. L., aged thirty-five, white, has been insane about twelve years. She was admitted to the New Jersey State Hospital, November, 1890, suffering from periodic mania. From the time of the first appearance of the menses, she had always evinced great nervousness during her periods. In her eighteenth year she manifested regularly during her catamenial flow, a condition of excitement and exaltation which, later on in life, became more marked, and in her twenty-third year she developed various illusions, hallucinations of sight and hearing, and delusions, all of which were manifested during her menstrual periods, and disappeared in a day or two after the disappearance of the menstrual flow, leaving her nervous, timid, and easily disturbed; this condition usually subsided a day or two later, and the patient was then apparently in full possession of her normal mental health, which continued until the reappearance of her menses, which brought about the recurrence of the symptoms and conditions named.

During the intervals of apparent normal health she is bright, cheerful, and entertaining, and being a lady of cultivated habits, adds much to the comfort and pleasure of her associates. Her recollection of her actions and deportment during her periods of excitement remains clear and precise; and there is always a disposition to repair any damage done while in her excited condition, saying that she had not self-control, or she would not have done so, etc. On one occasion, she battered and scarred a door leading from the ward she occupied, and after the abatement of her "spell," as she called it, she seemed much ashamed that she had done so rude a thing, and asked permission to cover the scars with her paint-brush, which she did in an artistic manner, by painting over them a beautiful landscape.

A careful examination exhibited a normal, healthy condition of the generative organs, not even tenderness on pressure over the ovarian region. This is a case such as every alienist and asylum physician has to deal with.

Dr. H. Sutherland, in the *Dictionary of Psychological Medicine*, states that of 162 cases of mania in females, no less than 99 had attacks of excitement that could be distinctly referred to the catamenial period; of the 99, in 11 the maniacal excitement occurred at periods varying from one day to one week before the accession of the catamenia; in the remaining 88, the mania appeared to occur and to be at its worst during the catamenial discharge.

Esquirol and Morel agree that menstruation constitutes the cause in one-sixth of the cases of insanity in females.

Icard says the menstrual function can, by sympathy, create a condition varying from simple troubling of the soul to actual insanity.

Dr. I. Ray, in a paper entitled "Doubtful Recoveries," written about twenty-five years ago, said: "In females, the menstrual period may be accompanied by abnormal excitement after convalescence has seemed to be fairly established." It is a safe rule, therefore, never to discharge a female patient until the menstrual function is performed without being accompanied by mental disturbance.

It has been claimed that the menstrual condition is simply associated with the periodic attacks, and is only an exciting factor at most, the real cause being an hereditary neurotic vice. Admit that it is simply the exciting cause, and that the patient has a bad heredity, is it not the duty of the physician to remove the exciting factor?

While first assistant physician at the Maryland Hospital for the Insane, I had under my care a robust and muscular woman who was subject to maniacal outbursts, accompanied by hallucinations and delusions, at the accession of each menstrual period. She was at these times noisy, destructive, and quarrelsome; she had been an inmate of the institution for about eight years, and it was generally known that my predecessors had exhausted the materia medica upon her. I followed in their footsteps, and gave her every drug reputed to benefit such cases—emetics, nauseants, cathartics, hypnotics, depressants, and tonics—and all without avail. Acting under the instructions and direction of Dr. G. H. Rohé, I performed an abdominal section and removed the ovaries. Complete recovery followed the operation, and the young woman, who had been looked upon as a "hopeless case," was discharged as recovered May 12, 1892, since which time she has remained well and earned her living. I wish to emphasize the fact that no lesion was found in the ovaries or tubes that would have warranted the operation, had not the menstrual function been, in our judgment, the exciting cause of the outbreaks; the results that followed the operation have fully justified its performance.

The menstrual function during perfect health is usually not attended by serious disturbance of the nervous or circulatory system. It lets off what, during pregnancy, would go to the nutrition and building up of the fetus, and that which, during lactation, is an addition to the nutrition and energy needed by the mother. In other words, it is a reserve force in nutrition and energy. Pozzi says: "It is the safety-valve;" but when we consider it in connection with a delicately poised nervous system that requires all its sources of supplies to be intact in order to preserve its equilibrium, it frequently means a loss of blood that is needed, a strain upon the nervous system it is unable to bear, a loss of energy it can ill afford to spare, a loss of poise, a deviation from a normal exhibition of nerve-force and healthy mental manifestations, and hence there is an outburst, as in the case related. Whatever theory may be accepted as to menstruation, whether it be that of ovulation, simple congestion, and the shedding of the endometrium, or that of nervous origin, it is certain that in delicately poised nervous systems the nervous phenomena attendant on this function are very marked and positive, varying in characteristics and intensity with the individual.

Whether the manifestation of mental perversion be due to the loss of blood brought about by the catamenial flow, the disturbances of the circulation, or the nervous strain incident to the performance of the menstrual function, the fact that between the periods there is a normal adjustment of the mental equilibrium, leads us naturally to the assumption that a permanent cessation of that function would tend to prevent the periodic outbreaks of insanity, and promote the recovery of the patient.

Hereditary predisposition, I hold, should not deter the physician from operating; while a case in which the heredity is good offers a more encouraging outlook, yet if a condition exists in which the highly susceptible nervous system of the patient is at regular intervals upset, and delusions with other symptoms of insanity are exhibited as a consequence of the performance of this function, which under other conditions would be a token of health, it seems to me that the physician's duty points clearly to the artificial establishment of the menopause. The delusions which in the earlier stages of this form of periodic insanity fade away at each period as the flow ceases, in the more advanced stages linger longer and show signs of more fixedness, until finally they become permanent fixtures in the mental organization, and there results an impairment of the intellect beyond the aid of either medicine or surgery; for this reason the earlier the operation is performed the better.

By reviewing the subject-matter of this paper, the following deductions have been drawn:

1. That in many cases of periodic insanity the exciting cause may be directly traced to the menstrual function.

2. That when the attacks of insanity are coincident with the catamenial flow, and an apparently normal mental condition prevails between the menstrual periods, it is fair to presume that the menstrual function is the cause of the attack.

3. That in such cases, the removal of the ovaries is justifiable, though there be no pathologic lesion discernible; the opinion is even more forcibly indicated than in cases in which a decided pathologic condition of the ovaries exists, but in which the connection between the lesion of the ovaries and the mental perversion is doubtful.

CLINICAL MEMORANDA.

A CASE OF MALIGNANT SYPHILIS RESULTING IN DEATH.[1]

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J. P. was born in France, and is forty years of age. He is of good family history and enjoyed excellent health (never having been sick since childhood) until the appearance of a chancre twenty-two days after exposure. The ulcer soon took upon itself a phagedenic character, and was shortly afterward followed by induration of the inguinal glands.

Nine days after first noticing the initial lesion the patient was suddenly confined to his bed with all the symptoms of an acute attack of rheumatic fever, and was, indeed, for a period of four weeks, so treated by his physician. At the expiration of this time, the disease being apparently no better, the physician was dismissed and I was called in attendance.

After a careful examination I discovered a suspicious eruption on the body (roseola), and obtaining the foregoing history I verified the presence of the chancre, which had not yet thoroughly cicatrized and bore evidence of its destructive ravages.

The pains complained of were not solely localized to the joints, which were, however, hot and slightly swollen, but were also particularly severe in the long bones of the leg and characterized by nocturnal exacerbations.

Examination of the internal anterior surface of the right tibia in its upper third revealed the presence of a small tumor, intimately connected with the bone. It measured 5½ centimeters in its transverse diameter by 4½ centimeters in length, and projected to the extent of about 1 centimeter at its most salient part, but the edges were insensibly lost in the surrounding tissue. To the touch it was almost as hard as the bone itself, and was surrounded neither by edema nor peripheral inflammation, and the skin covering the part was both healthy and movable. The patient claimed to have noticed its presence for about ten days; he was certain that it was at no time attended by external evidences of inflammation, but thought that its growth was most rapid at the onset. The localized pain, which dated from the beginning, was extremely lancinating but paroxysmal in character and greatly increased by the slightest movement.

The fever at this time was rather quotidian in character, the morning temperature averaging 99.5°, and rising in the evening to about 103°, unaccompanied by chill, but by an intense cephalalgia which continued for period of three or four hours each evening, after which a profuse perspiration took place.

Under the mixed treatment the case rapidly improved and the patient was able to resume his occupation in two weeks' time. The growth upon the tibia slowly diminished in volume and had practically disappeared in about one month, with the exception, however, of slight permanent thickening at the crest of the tibia, which remained the seat of occasional intermittent pain.

Three weeks later (about ten weeks after the appearance of the chancre), during office-treatment, my attention was called to a sensation of pain referred to the roof of the mouth during the act of eating. An examination of the part showed a considerable amount of brawny swelling, together with a deep, irregular, yellowish ulcer near the median line, about 2½ centimeters in size, and surrounded by a line of inflammatory redness. In a few days the ulceration in question was noticed to have spread considerably and had apparently invaded the deeper structures.

Notwithstanding all local treatment directed to the part, in conjunction with internal medication, the destruction of tissue continued until the bone itself became affected. At about this time the patient was seen by Dr. William G. Porter in consultation, but in spite of our united efforts necrosis of the hard palate, as well as of the alveolar processes of the superior maxillary bone and of the nasal bones, occurred in turn, and the ulceration only assumed a latent condition during the last half of the duration of the malady, when a perforation the size of 6 or 7 centimeters had taken place. This was attended by the loss of several teeth and imparted to the voice the nasal sound characteristic of this condition.

Shortly after the beginning of the necrosis the patient commenced to lose rapidly in weight and strength, and a marked cachexia became an important feature.

A pustular eruption upon the face and scalp was now noticed. The bone-pains returned and the debility was so great that the patient was confined to the house. Curious to state, the appetite was greatly increased; indeed, the condition of syphilitic boulimia, so well described by Fournier, soon became manifest, as on several occasions during the absence of the wife, the patient invaded the pantry and partook, according to his own estimate, of enough food to satisfy three or four men. It may be mentioned here that, to a certain extent, the patient had become accustomed to the trouble occasioned by the passage of food, and could now swallow fairly well.

This condition was attended by little digestive disturbance, beyond, on rare occasions, slight attacks of diarrhea; but, on the other hand, gastric crises became pronounced and seemed to be especially aggravated by

[1] Read before the Philadelphia County Medical Society, April 26, 1893.

any form of mercurial treatment. These painful attacks continued throughout the progress of the case, and were equally noticeable during a course of restricted diet.

In the eighth month the anemic condition was extremely marked, and the patient, from a weight of one hundred and ninety pounds was reduced to one hundred and forty pounds. In despair he entered the Pennsylvania Hospital, but remained only for two weeks, his chief grievance being the restricted diet to which he was subjected, and which ill-accorded with his continued enormous appetite. During this, as well as on previous occasions, careful and repeated examinations revealed no disease of the special organs.

An examination of the blood showed three million red corpuscles per cubic millimeter and a diminution of the hemoglobin to 40 per cent. An anemic basic murmur, as well as a venous souffle, was also to be detected. Added to this, the prostration, the sallow complexion, the pallid face, pinched features, and sunken eyes, made a picture long to be remembered.

In the tenth month esophageal obstruction was complained of, and an examination by bougie, made by Prof. E. Laplace, showed some constriction, which, however, did not become extreme. At this time localized pain in the lumbar region began and soon became excruciating in severity. This was attended by occasional loss of control of the sphincter of the bowel and remained present until the close of the disease.

Some three weeks before his death he was removed from under my care to the Medico-Chirurgical Hospital, but the prostration became more marked and he died a little over one year after the beginning of the disease.

Unfortunately, notwithstanding strenuous efforts, a post-mortem examination was refused.

As may be imagined in a case of the foregoing character, our treatment was as varied as it was unsuccessful.

Early in the case the exhibition of either mercury or of potassium iodid seemed to aggravate the gastric crises, and, besides, to be followed by an irritative diarrhea. Inunctions were tried, but with similar results. Fumigations were likewise discontinued for the same reason, and even the recently vaunted hypodermatic method was certainly open to the same objection. The inunctions were continued for the longest period of time. General tonic treatment, although better borne, was of little apparent use.

On investigating the literature of this subject I find a rather growing tendency among the more recent syphilographers to appreciate that our accepted laws regarding the three fixed and precise stages of the disease must submit to some modification. For example, Keyes, in his last edition, writes as follows:

"The line between secondary and tertiary syphilis is not always well marked, and although in typical cases the lesions become progressively deeper, commencing as mere efflorescence in the secondary stages, and gradually increasing in severity to the most extensive ulcerations and destruction of bone and cartilage in the tertiary, yet some of the symptoms naturally belonging to the secondary group, as the mucous patch and scaly eruption, frequently crop out in the tertiary stage, while more rarely nodes come on with early syphilis, and occasionally most extensive ulcerative or other tertiary (gummy) lesions appear within the first few months after chancre, perhaps all the lighter secondary eruptions having been omitted. This form is called malignant syphilis."

Osler[1] tells us that "In exceptional cases, manifestations which usually appear late (such as gummatous growths) may set in even before the primary sore has properly healed."

C. Mauriac, one of the most eminent of the French authorities, in his very interesting work,[2] details the history of a number of cases, of which the following is a short *résumé*:

OBS. I.—Case beginning with indolent enlargement of both inguinal glands. Eight days afterward there was appearance of chancre. On the twentieth day of the initial lesion there were attacks of cephalalgia with appearance of frontal tumors; then secondary symptoms, cutaneous and mucous, etc. Mixed treatment was instituted, followed by cure.

OBS. II.—Period of incubation of two months' duration, with short duration of secondary symptoms. Parietal tumor with neuralgic pains.

OBS. III.—Omitted. Dates uncertain.

OBS. IV.—Chancre of lip, and swelling of the cervical glands. One month afterward, slight secondary symptoms were followed by a tumor on the parietal bone.

OBS. V.—Syphilis of five months' duration without treatment was followed by a tumor in the fronto-temporal region, etc.

Mauriac claims that these nodes are the result of periosteal inflammation, and tend to spontaneous recovery without suppuration. But he quotes an account of a case reported by Dr. Henri Roger, which resulted in a different manner:

A girl, aged two years, acquired syphilis by kissing an infected mother, and presented the following lesions at the same time: 1st. Indurated chancre on the superior lip, not yet entirely healed. 2d. Copper-colored spots of roseola on thighs, on forehead, nose, and cheeks, and mucous patches on the vulva and anus. 3d. Multiple exostoses; gummy tumors of the frontal bone the size of a filbert, with healthy skin-covering, and semi-soft consistency; the right one reddish and shining at the apex, imparting the sensation of fluctuation, and which did in time suppurate.

Mauriac details the occurrence of other cases presenting similar lesions in the bones of the legs, sternum, and other parts of the body.

In these thirteen cases the shortest period of incubation after the appearance of the chancre was fifteen days, and the longest one hundred and twenty days. Curiously, the shortest of the series presented a history which resembles the one forming the subject of this paper. Briefly stated it is as follows:

OBS. VII.—The patient, a man, nineteen years of age, of habitually good health, had a urethral chancre, which showed itself one month after his first connection. On the forty-fifth day he had acute pains in the tibia, followed in from twenty-six to forty-eight hours by the spontaneous appearance of a bony tumor. Alteration of general health ensued. On the sixty-ninth day well-

[1] Practice of Medicine, 1892.

[2] Mémoires sur les Affections Syphilitiques précoces du Système Osseux. Paris, 1872.

characterized roseola appeared. On the sixtieth day there was diminution of the tibial tumor and final disappearance of it. Four and a half months later mucous patches appeared on the lips and prepuce. Papular syphilis, etc.

Vidal de Cassis[1] reports the case of a tumor of the right clavicle occurring one month after chancre. The skin-covering was perfectly healthy, the tumor twice the thickness of the bone. There were extreme localized pains. Cure resulted in two months' time. Dr. Guyot[2] reports a case of syphilitic periostitis of the first metatarsal bone, fifty-six days after infecting exposure.

According to M. Daga,[3] syphilis is so severe among the Arabs that it is not rare to witness in the same subject the presence of syphilides, of gumma, and of multiple exostoses. Tertiary symptoms themselves may be observed at the very beginning of the disease.

According to the researches of M. Maltegazza[4] syphilis pursues its course with great rapidity in South America, and manifests itself from the beginning not only by superficial cutaneous and mucous lesions, but by osseous lesions and even the destruction of the bones of the nose almost immediately after the appearance of the chancre, and always before its cicatrization.

As eminent an authority as Prof. Hutchinson,[5] of London, reports the following interesting case:

"A young man, aged twenty-one years—too young, let me note, for it to be likely that he had ever had syphilis before—was admitted into the London Hospital. He had still the remains of a hard chancre on him which was ulcerating in places. The date assigned to the beginning of the affection was only four months previous. He died suddenly and unexpectedly. The necropsy showed gummata in both testicles, in the spleen, and in the heart, death having been caused by the softening ulceration of the latter."

He adds, in conclusion:

"I have urged that many of the phenomena of syphilis usually counted as tertiary really occur, as a rule, in the early periods, and there is no structure of the body which may not be attacked in the secondary stage. As an instance of this fact, I have mentioned rupia, periostitis, and disease of the viscera and nervous system."

Dr. R. W. Taylor,[6] of New York, reports several interesting cases of the gummatous form of the skin-affection. He says, in conclusion, that these lesions may appear as early as the second, third, or fourth month after the initial lesion and may terminate in ulceration.

Records of early syphilis of the nervous system are also attainable. Taylor reports a case of hemiplepia in the fifth month; Bassereau et Vidal de Cassis, one of facial paralysis a few weeks after appearance of chancre. Van Buren and Keyes and Fournier respectively detail several instances of different forms of paralysis occurring before the fifth month. Fortunately these cases are very rare. For example, Mauriac mentions that the thirteen cases reported by him represented an experience of over four thousand cases of syphilis. Whether they represent an unusual amount of the virus absorbed, or an undue susceptibility on the part of the individual, is an open question.

The general opinion would seem to indicate the possibility of a severe syphilis following a case of phagedenic chancre, as, for example, Batington[1] tells us that "The symptoms which follow the phagedenic sore are peculiarly severe and intractable. They commonly consist of rupia, sloughing of the throat, ulceration of the nose, severe and obstinate muscular pains, and similar inflammation of the periosteum and bones. Similar complaints will follow the ordinary chancre; but when they follow a phagedenic sore they are very difficult to be cured; and it is not uncommon that the constitution of the patient should at length give way under them, and that the case should terminate fatally." Bassereau,[2] as well as Diday, agrees in the main regarding these statements. Bumstead and Taylor[3] in commenting on the foregoing, express themselves as follows: "Admitting the truth of this rule, it does not follow that the condition of the chancre in any manner determines the severity of the subsequent symptoms, but merely that it is an indication of the activity of the virus and of the state of the patient's system—the two causes upon which the severity of the attack chiefly depends."

The latter observation does not agree with the history given both by my patient and the members of his family. It was particularly claimed that he had enjoyed unusually good health throughout his life, nor was the quantity of alcohol which he took in excess of that commonly used in his occupation.

Regarding the presence of the nodules on the tibia, these latter occurred after a longer period of time than in the one case (Obs. VII) reported by Mauriac, yet the gummatous ulceration of the hard palate at so early a period is, as far as I can discover, without a detailed precedent, and certainly places this history prominently among similar records.

1 Traité des Maladies Vénériennes, 2d edition, pp. 479, 480.

2 Société Médico-Chirurgicale de Paris, July 9, 1868.

3 "Documents pour servir à l'Histoire de la Syphilis chez les Arabes," Archives de Médecine, 1864, t. ii. p. 314.

4 Quoted by Mauriac.

5 "Some of the Moot Points in the Natural History of Syphilis," British Medical Journal, January 23, 1886.

6 In an article entitled "Precocious Gummata," American Journal of the Medical Sciences, July, 1887.

SECONDARY CELIOTOMY FOLLOWING AN OÖPHORECTOMY.

BY RUSSELL CAFFERY, M.D.,
OF SAN ANTONIO, TEXAS.

MEDICAL journals chronicle but few cases in which secondary celiotomy is performed for the relief of the same symptoms for which the primary operation was undertaken. A case requiring such interference has come under my care during the past summer, and will serve to illustrate how symptoms and conditions entirely local in character, and of sufficient gravity to necessitate surgical interference, may arise.

Some six years ago the patient, after submitting to a criminal abortion, was confined to bed for two months. From that time she experienced constant pain in each iliac fossa, which was much worse at the catamenial epoch. The severity of the pain was augmented each

1 Ricord and Hunter: Venereal Diseases, 2d edition, p. 371.

2 Bassereau: Histoire Naturelle de la Syphilis, p, 84.

3 Bumstead and Taylor: Venereal Diseases, 5th edition, p. 499.

month, until metrorrhagia was added to her already long list of ailments. Toward the close of the year 1888 her suffering became intolerable and she sought relief at the hands of an eminent gynecologist in one of the northern cities. She tells of days spent with electricity and massage in an effort to obtain relief, but, to use her own words, "If such a thing were possible, I grew worse." Finally, oöphorectomy was proposed to her as being the only possible means of relief, and as offering a reasonable amount of certainty as to a permanent cure. The woman readily assented, so firmly resolved was she to obtain relief at any sacrifice. The operation was performed a month later. The ovaries were enlarged and cystic, and were removed. Speedy recovery followed.

In six weeks from the time of the operation the woman left the city much improved and free from pain. Her period of immunity from suffering was destined to be short, for after the lapse of a few months she awoke one morning to find the "same old pain" in her left side, though somewhat modified in character. As time went on, her suffering grew more intense until it had assumed its previous severity, and differed only in that it was a little more intermittent.

The limits of tolerance were again reached, and she applied to me several months ago for relief. She was then suffering from exaggerated metrorrhagia, the hemorrhage being so profuse that when it occurred simultaneously with a paroxysm of pain syncope followed. This hemorrhage was regarded as entirely symptomatic, and a thorough investigation as to the exciting cause was decided upon, chloroform-anesthesia being employed.

On examination of the genital tract the cervix uteri was found lacerated, as a result of former labors. The cervical canal was patulous. The uterus was anteverted; the depth of the uterine cavity was quite a half-inch in excess of the normal; and its interior was covered with fungosities. Further examination revealed the presence of a tumor in each iliac fossa in the normal situation of the appendages. The body upon the left side was slightly larger than a hen's egg, rather dense, but fluctuating over a circumscribed area. The mass on the right side was irregularly shaped, dense, and thoroughly immovable. At this time the fungous growth lining the endometrium was removed with the curette, the cavity thoroughly irrigated and packed with iodoform-gauze, and the patient put upon quinine and strychnine, alternating with syrup of iron iodid.

The metrorrhagia ceased, but the pain in the side continued with unabated intensity. Operation was again proposed and assented to. On September 5, 1892, celiotomy was performed according to strictly aseptic methods. The tumor on the left side consisted mainly of a section of ovary in a state of cystic degeneration, quite a mass of adhesions and semi-organized blood-clot, all bound by adhesions and in intimate contact with the excised end of tube, of which about two and one-half inches remained. The tube was ligated with braided silk at its junction with the fundus uteri, and excised. The mass was then included in a Staffordshire knot and removed. A like condition of affairs existed on the opposite side, with the exception of cystic change, and similar treatment was employed. The abdominal cavity was then irrigated with sterilized water, and the wound, including the peritoneum, closed with silver wire.

Fully two hours were consumed in the operation; shock was, however, but slight. The temperature was 99° F.; the pulse 98; the respiration 20.

The woman received hypodermatically morphine, ¼ grain, dissolved in brandy, besides tablespoonful quantities of hot water to control nausea. The temperature remained normal until about the end of the second day, when it went to 101° F., the highest point reached at any time. The bladder was evacuated by the catheter. The bowels were moved on the sixth day by means of warm-water enemata. Drainage was insured by means of a glass tube into which were dipped strips of iodoform-gauze, and this covered with oiled silk, in addition to the regular abdominal dressings. The strips were withdrawn twice daily and the accumulated fluid removed with a glass syringe and rubber tube. The drainage-tube was removed on the fourth day, and the stitches on the tenth.

The patient progressed to a satisfactory recovery, without an untoward symptom; she sat up in bed on the eighth day, in a rocking-chair on the twelfth, was moving about her apartments on the fourteenth, and went carriage-riding on the sixteenth day. On the twenty-fifth day she set out on a journey of five hundred miles, and now (some months since) says that she feels as she has not felt since maidenhood.

Just at this time, when some of our gynecologists are in the throes of an unstable reaction against what is termed the "indiscriminate emasculation of females," this case appeals to my mind as being of peculiar interest. From the patient's history and the conditions found, doubt no longer exists as to the intentions of the primary operator. It was a step in the direction of conservative tubo-ovarian surgery—a laudable ambition, no doubt, but of its wisdom, subsequent developments in this case must decide.

Eminent men are now advocating conservatism in ovarian surgery, meaning the partial extirpation of tubes and ovaries having undergone morbid changes. Men who have risen to the topmost heights of the ladder of fame, and who have grown weary of their successes in the practice of gynecology as it is known to-day, are now seeking new gynecologic fields to conquer, and are at the same time telling us that the very methods by which they have ascended to these dizzy heights are unstable, that the practice is based upon wrong principles, and is destined to become obsolete, to be supplanted by the "more modern method of conservative surgery."

Conservative ovarian surgery will no doubt become a recognized and established practice, applicable only to a few rare cases not recognizable by the average operator, but only by men doing a highly specialized practice in this department. Then, to our mind, the duty of the surgeon is plain. If, after he has opened the abdominal cavity and finds changes sufficient to warrant his molesting the ovaries and tubes at all, they should, if possible, be removed entirely. The histologic structure of the organ and the character of the morbid processes usually sought to be corrected, to my mind constitute an insurmountable obstacle to any practical good we may hope for from our efforts to arrest the progress of the disease. This, with the gravity of the operation itself, ought to

warn the surgeon against subjecting a patient to the risks of a second celiotomy simply in the hope of re-establishing and perpetuating the function of ovulation, when we know that, of necessity, it will be defective and unsatisfactory.

RECOVERY AFTER SWALLOWING A TEASPOONFUL OF AMYL NITRITE.

BY GEORGE ERETY SHOEMAKER, M.D.,
OF PHILADELPHIA.

A SHORT time ago I was hastily summoned to see a man, sixty years old, of robust physique, who had by mistake taken a teaspoonful of undiluted amyl nitrite. About three minutes after the drug was taken I found the man sitting in a chair, with a moderately flushed face, a pulse of 112, and complaining only of a little headache. Being of a sluggish temperament, he did not appear to realize the gravity of the situation, and received philosophically the treatment instantly instituted. He was successively given several glasses of warm water; a hypodermatic injection of gr. $\frac{1}{4}$ of apomorphine; mustard in warm water; zinc sulphate in warm water; another gr. $\frac{1}{4}$ of apomorphine; more mustard and warm water; so that just seven minutes after he took the drug copious vomiting of a very hearty unmasticated meal occurred. The evacuated matter emitted a strong odor of amyl nitrite. Vomiting was very copious indeed, the quantity of food, evidently just eaten, being enormous. Digitalis and brandy were now injected beneath the skin; and the patient was put to bed and surrounded by hot bottles. His face was moderately blue; the extremities cold; respiration shallow, but regular; the pulse weak, but only 68 to the minute, five beats being dropped in that time. Strychnine sulphate in doses of gr. $\frac{1}{30}$ was frequently repeated; digitalis and brandy were continued, and external heat was maintained. Two hours later the pulse had ceased to intermit, and the patient was even jocular, though weak. The next day nothing abnormal could be detected in his condition.

Consciousness was not lost at any time, though the man seemed drowsy and stupid. There were no twitchings or convulsions, no irregularity of respiration. The man was constantly watched and every symptom carefully noted as to time, a record of pulse being taken every five minutes, but no symptoms developed beyond those narrated. To avoid alarming the patient and arousing his suspicions, which seemed to be marvellously few, no effort was made to learn subjective symptoms.

Recovery was due to the fact that the patient's absorptive powers were sluggish. He no doubt had a dilated stomach which he had just filled with food. The promptness with which it was possible to empty the stomach and administer stimulants no doubt also helped in the fortunate outcome.

An examination of some leading works on therapeutics gives the reader little help as to the proper treatment of poisoning by amyl nitrite.

Digitalis and strychnine were pushed in this case because the heart was failing.

3727 CHESTNUT STREET.

Erb has declined the chair of the Second Medical Clinic in the University of Vienna.

ORIGINAL LECTURES.

TWO CASES OF PULMONARY TUBERCULOSIS: ONE CHRONIC, ONE ACUTE.[1]

BY WILLIAM PEPPER, M.D.,
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GENTLEMEN: I showed you last Saturday a case and specimens illustrating chronic pulmonary tuberculosis, and I have this morning to show you several patients presenting different phases of this so prevalent and so terrible affection.

This man is fifty-two years old; there is no family history of pulmonary disease; his father died of cholera, his mother at eighty years, of old age. He himself has been sick for seventeen or eighteen years, beginning, therefore, when he was about the age of thirty-five; he has had within this time more or less continuous cough, and three distinct hemorrhages.

The physical signs are: A flat chest, with prominence of the scapulæ and clavicles; increased fremitus on both sides; dulness at the upper portions of both chests; a slightly emphysematous condition of the lower lobes; the auscultation signs correspond, showing lesions at both apices.

Now, here is a case that illustrates, in the first place, what we so often see in pulmonary tuberculosis, an absence of hereditary tendency. It is the greatest mistake in the world to suppose that if you are not of a tuberculous family that you cannot become tuberculous. It is perfectly true that heredity is of immense importance. That children of parents who have had pulmonary tuberculosis are proportionally more disposed to it than those who are born of healthy parents is unquestionably true. I pointed out to you, when speaking of tuberculosis, how little children born of tuberculous parents are likely to have tuberculous meningitis, the early manifestation of tuberculosis; how it has been shown that the fetus may come into the world tuberculous; do not let us, therefore, underestimate the importance of heredity.

When a patient coming from a tuberculous family has escaped in childhood and grows up, and then is taken with the disease, say at twenty or twenty-five, the fact that his family history is bad is a very unfavorable element in the prognosis. In some families there seems, therefore, to be a special liability to invasion by this disease. Just so, on the other hand, there are cases, as in that the specimen from which I showed you, and in those to which I alluded, in which the lungs and the system seem able to repel the disease, or in which it is circumscribed by fibrous tissue and its progress arrested and limited to a small area until old age, when the person dies of some other disease, and the evidence of the infection is found at the autopsy. On the other hand, in some families it seems that there is no power of resistance; the system does not react against the invasion. There must be some anatomic defect in such people or some chemical defect, for the process when once implanted spreads rapidly.

While, then, it is true that families that have had pul-

[1] Delivered at the University Hospital, Saturday, February 25, 1893.

monary tuberculosis often show the disease in successive generations, none the less is it true that some of the strongest people that come under your observation are those born of tuberculous parents. I remember the case of five children that I have known as if they were my own. The oldest boy died of a fearful outburst of universal miliary tuberculosis; every organ in the body was affected, the membranes of the brain, of the heart, the lungs, the liver—every part of the body was studded with tuberculous deposits. At that time the parents of that child were young, vigorous people, under the most favorable circumstances. Other children were born, and after the fourth, the father developed the affection, of which he died in about two years. The youngest of those four children was raised with great difficulty, and gave me much anxiety, but he is now a rugged boy. About five months after the father's death the widow gave birth to a posthumous child, and this child is the strongest of the five. The power of the mother to imprint her splendid constitutional health upon that child asserted itself to such a degree that, although at the moment of procreation the father was in a state of advanced tuberculosis, he was utterly unable to taint or vitiate the system of the product of conception. Marriage discloses many problems of this kind.

Of course, the worse cases of transmitted tendency are those in which both sides are diseased, in which the child is vitiated by both sides. If one side, particularly the maternal, is free, you may find in a group of children, when even one or more show a tendency to pulmonary tuberculosis, some with constitutional vigor. In the next place, however, do not let these instances lead you to give any assurance to a person born of perfectly healthy parents, who have no disease at all, whose life-history is good, but who are in delicate health, that he is not liable to this disease. No matter of what nature the ill-health of the parent is, the child may come into the world with a defective resistance-power, and let that child become catarrhal, and the bacilli of tuberculosis get into its system, it may not be able to repel them, and the disease may progress with as great rapidity and virulence as if the parents had actually been tuberculous. Then, although both parents are perfectly well, with no disease as far back as you can get, never shut your eyes to this fact, that on provocation every one of us is liable to the disease. Let a person task his strength, let a growing child become weedy and lank and below weight, and the system relaxed, and there is developed a field where tuberculosis, if implanted, will spread.

Now take the case of this man. His father died of an acute disease and his mother of old age at eighty. What gave him the disease? He had gone to the age of thirty-five; he was born in Antwerp, was living in London when taken ill, and was working as a cigarmaker; he was the father of children; he got on well and had to work but eight hours a day; he states that there was not much dust where he worked, but that among the workpeople in the factory there was more or less sickness of the kind from which he suffered, and I know that it is a depressing business, and that it turns out a large proportion of sick, due to the dust-laden air, which lowers the physiologic tone. The patient tells us further that this trouble came from a cold; he had a cough, and took something for it, and kept on at work. That is the usual story, and there is a great deal of truth in it—not that the "cold" is tuberculosis of the lungs, for we know better than that now. We know that people do not have the disease unless they become infected by the bacillus of tuberculosis; but we also know that to prepare the way for the invasion of the bacillus there is nothing like a catarrh. Get a local catarrh, so that the mucous membrane becomes porous and sticky with mucus, and the bacillus lodges there and gains entrance to the superficial layers; and then, unless the system is vigorous and repels the disease, it may advance and spread. There is none here who has not had tubercle-bacilli enter his air-passages, but there must be some resisting power which has made it impossible for these organisms to gain entrance into the system, and which has prevented them from spreading. I have breathed the exhalations of tuberculous patients daily, yes, almost hourly, I might say, for years, so that there must be some power within me which repels them. But on the other hand, in those who are weak and have not the resisting-power, infection will occur, and pulmonary tuberculosis is the result.

This man probably had some catarrhal process before he became infected. Some pathologists laugh at the idea of a cold having anything to do with it, and say that it is inevitably an infective process; but it is not so clinically. The system gets "runs down;" then follows a cold, a catarrh, the bacilli lodge, get into the pores of the mucous membrane, invade the tissues, then spread; hence the catarrhal element can never be dismissed. When Niemeyer said that the worst that could happen to a consumptive was to become tuberculous he said a very impressive thing, which has been ridiculed a great deal; but he announced a great clinical truth, and one in which clinicians will concur, that there is thus a pre-tuberculous stage, when the system is getting ready, and then, in many cases, infection occurs, the bacilli spread, and the disease becomes established.

I do not know about this man; perhaps the tubercle-bacilli irritated his mucous membrane and caused the catarrh, as is contended; but it is often the other way, rather than being tuberculous from the beginning. So, in spite of the work of the bacteriologists, I stand very much on the same ground that Niemeyer did, only nothing like to the same extent, anatomically speaking.

After this man got the disease, see how hard he fought it! He is not half dead yet, though he has been affected for seventeen years. There comes the thought, has not the fact that there is a tough fiber in him, his mother dying at eighty years, and his father of an acute disease, and he not having the tuberculous tendency—has not that helped him? Of course it has; and so we recognize on both sides the value of this hereditary principle.

As we examine him we recognize a typical case of the chronic type of the disease—long fingers; blue, incurved nails, the result of chronic capillary stasis, such as I have shown you so often in long-standing venous obstruction; very white, delicate surface; sensitive skin; muscles relaxed. He has not at all a bad-shaped chest; rather high shoulders, prominent clavicles, but the tissues are all wasted here, and when he was in good condition he undoubtedly had a good chest. Coughing and weakness of the muscles have caused a "hunching" forward; but

you would not speak of this as a tuberculous thorax; it presents the appearance merely of an emaciated thorax. The man breathes rapidly, with a good deal of up-and-down motion, and very little expansion. There is no obstruction to interfere with the air going into the lung-tissue; there is no mechanical obstruction in the larynx to the entrance of air; the obstruction lies more deeply in the lung-tissue itself, and we have this recession, almost, of the base of the thorax; it moves out a little on the left side, with a good deal of the motion of elevation and depression. There is a cracked-pot sound over the left clavicle, and a little clinking sound; at the right apex there is marked impairment; there is resonance around the right nipple, but nowhere flatness, nowhere marked dulness. That little chink on the left may be due to what we sometimes elicit by suddenly compressing the lung and forcing the air out of the tube, which gives us a pseudo-cracked-pot sound. In these old cases you must be prepared to find the dulness greatly obscured by surrounding emphysema, and you will estimate the disease less by the results of percussion than by those of auscultation. The lung-tissue has become so distended by prolonged, violent coughing that there are patches of emphysema, and they obscure the dulness and the little areas of consolidation.

On auscultation I find copious moist râles over the upper part on the right, with prolonged expiration, and close up under the clavicle a very limited area of tubular breathing. This latter is either owing to consolidation around the main bronchus, or there is a little cavity at the extreme apex. Posteriorly the cavity extends to the back, and is quite large, giving rise to blowing breathing, large moist râles, and pectoriloquy. There is, then, a scattered area of infiltration over the anterior part of the lung, and at the apex and more posteriorly an excavation with large almost bubbling râles and pectoriloquous voice. Now, you would not suppose from the percussion that there was so much trouble there; yet how little disease there is when we consider how long it has lasted! On the left side there is freer movement than on the right; there is blowing respiration, distinct pectoriloquy, with noisy respiration all around, and only a few râles. There is evidently an old cavity at the extreme apex and emphysema all around it. The posterior part of the lung is in fairly good condirion, and the resonance is little altered.

Now what has saved this man is the fact of his great physiologic repugnance to admit the bacilli into his system; his tissues have resented their attack; the disease has been limited all these years to the very apices of the lungs. Note how constantly it is that the apices are affected in this disease, though not invariably so; you may find a patch at the root, or even at the base; but in the vast majority of cases you will find in cases in which the base is involved, that the disease begins above and spreads downward; but this man's system has not allowed it thus to spread. On the left side the lung has become enlarged, emphysematous, and the disease has become almost entirely restricted; so that as far as the left lung is concerned the man may live indefinitely. The spot on the right side is the only one we have to fear, for the numerous râles make me think that it has a tendency to spread, but this can be told only by watching him from time to time and weighing him, for a study of the movements of the body-weight is most important. As long as a man holds his own in weight, or gains a little, the physical signs may continue month after month, year after year, and if the disease does not spread, and the system keeps up its level, we have not a general but practically a local tuberculosis, the system having prevented general infection. What this man has to fear is the breaking of the bacilli from their bounds and spreading, and so a little patch on the left side behind the scapula would mean more than any continuance, however prolonged, of signs on the right, with the most copious expectoration, or even actual hemorrhages—of which this man has had three.

His is a splendid case, and one worth working for, and I hope by persistent hygienic care that the disease can still be localized; that if the conditions of life favor him, he may go on many years without this spreading and becoming general, without its carrying him down. I have just learned from his physician, who examined him three years ago, that there is practically no change in his physical signs.

Our second case is L. W., aged twenty-three, a child's nurse; her father died of asthma, her mother of pulmonary tuberculosis. Here you see we have just the opposite point of view from that of the preceding case. This asthma may, indeed, have been asthma, and it may have been a chronic disease, like tuberculosis or emphysema, with a great deal of bronchitis. The parents had a numerous family—no less than nine children—and of these, six, including the patient, survive, two sisters and a brother having died of tuberculosis of the lungs; three sisters and two brothers are living, but none of them is very strong. Now this family history is in striking contrast to that of the last case, a notable illustration, too, of what I said to you of the great gravity when both parental families are affected; and of the fact that such offspring are not very strong, that they are usually below weight, and very liable to suffer from catarrhal processes, and that when attacked by tuberculous infection they prove to have a very poor resisting and limiting power.

The patient is now twenty-three, was always strong until she was nineteen, since which time she has had more or less cough, with no constant expectoration, or discharge of blood. Three months ago she was examined first, carefully, by Dr. Daland, who found signs of incipient trouble at the right apex. To-day the note is: "Slightly diminished expansion, increased fremitus and resonance more distinct, feeble inspiration, prolongation of expiration, which is also harsher than it was three months ago. Until three weeks ago she gained in health and weight, weighing five pounds more than in November; during the past two weeks she has lost two pounds, largely due to loss of sleep."

Here is a marked hereditary tendency in a girl who was strong until four years ago. What I wish you to realize is, that this girl was under no necessity to get this disease, and I do not know that she would get it now if she were under favorable circumstances. If she had had a good hygienic life, with good surroundings, there is no reason why she should not have gone on being a strong girl, and if you can keep these cases strong until their frames have developed they may become the very strongest of the strong through life.

Nothing is more certain than that the tendency may be eliminated by hygiene. If you take children of parents whose history is very bad, and they are protected properly, their whole tendency may be eliminated. But what are you going to do with a girl who has to go out at the age of nineteen, among strangers, to accept a responsible position, to take care of fretful children, to lose much sleep. There is nothing which so much aids in the resistance of disease as great quantities of sleep, for during sleep the blood and the nervous power are restored; but deprive one of sleep, and how susceptible he becomes to every depressing influence, and this is doubly true in one who has an inherent weakness.

She has been coughing at intervals for several years, and during that time she had not yet developed this disease, and even then under proper circumstances she might have become a strong woman. There was a pretuberculous period; she had catarrhal irritation; she was overworked; she took one little cold after another; and the mucous membrane becoming more and more receptive, was apparently waiting for the time she should come across the first tubercle-bacilli to become infected and the tuberculosis started. Catarrhal irritations in the young, and especially in those known to have a tuberculous tendency, should be regarded as serious things, and heeded; they gave fair warning here, but unfortunately they could not be heeded. When a person has a tendency to tuberculosis, and then develops a catarrhal process, and it hangs about him under depressing influences, it is only a question of time when the process will start, and when once started, there is every fear that progress will be rapid.

This girl was seen three months ago with the little trouble at the right apex. She has a good, plump arm, well-built chest, good muscles, and a good heart, an important factor. There is absolutely normal breathing at the left apex; at the right apex the first thing noticed is the weakness of the respiratory murmur. Do not always be listening for râles, or for some great change, like blowing breathing. It is really of the greatest importance to recognize beginning changes before the stage of râles or blowing breathing is reached. The inspiratory murmur also at the right apex is not one-third as full and strong as it is at the corresponding spot on the left side, and you should never fail thus to examine corresponding sides, as all the conclusions we draw are from comparison. When I ask her to cough not a single râle is elicited. Posteriorly there is prolongation of expiration, slightly blowing—not one râle front or back. There is good percussion-resonance posteriorly; distinct increase in the vocal fremitus and vocal resonance; anteriorly on the left, perfect; on the right, quite good resonance. If there is any difference it is simply a lack of power of expansion at the extreme apex. Now what does this mean? Why merely that there is a little thickening, a little catarrhal process in the mucous membrane, which has now extended to the alveolar walls, and there is a little thickening of the walls, which has lessened their elasticity and, they do not open and close as promptly and with the freedom of a perfectly healthy lung. This causes weakness of the respiratory murmur, with prolongation of the expiration. You may not speak of it as consolidation, but only as the slightest degree of thickening; but you can never expect any human being who has such a process there to escape infection, and with a person like this, if the tuberculosis is once implanted there it would be tremendously hard to expel or eliminate it. She raises no phlegm, yet she has some fever; her pulse and heart are good; her general strength is good. I don't like this vivid flush of the cheek; it rather indicates lack of vascular tone, and that is part of the increased tendency to infection, as persons with such circulations seem to me rarely to possess strong power of reaction.

Now, if this girl has no rise of temperature there is still ground to hope that the process does not tend much to spread; but there has been considerable increase in three months, and everything here justifies anxiety; she must be watched in the most careful manner. She has gone through a dreadful winter with troublesome little children to take care of; but the spring is coming, and I would not attempt to break up things or to urge her in any way to give up her work at present. If, however, with favorable weather, May does not find her cough decreased and her weight improved, then comes the time for something more radical, and everything must be done to give her a year or summer to react and thwart this process. Can there be anything more piteous, more sickening and heart-breaking than to deal with cases of this kind, when you cannot do for your patient the very best thing that can be done? It is to be simply a question of diet, of hygiene, with something to allay the cough. The radical thing is the ability to go to a different climate, and have a life of two or three years absolutely without occupation, without care, where there may be every comfort, and the most advantageous surroundings. Grant these to patients, and they are put under the most favorable conditions to combat the disease, or if we had more country homes or farms, where such people could be sent and have proper supervision, it would go a long way toward breaking up this disease. Unfortunately, now it has spread to such an extent that we can only attack it here and there; but we know that this is the greatest battle to engage in, this battle with tuberculosis, and there is nothing that you can do that will benefit future generations so much as devoting your best efforts to prevent the spreading of this disease.

The stage in which this girl is is the time for making a diagnosis, where there is a chance for radical cure. I am as sure as finite being can be, if this girl could go to Colorado, and stay there, or to any dry, bracing climate in the country, and live out of doors and take care of her herself, that this would be stopped and she would become a perfectly healthy woman; but that is a different thing from being in a nursery, with troublesome children, and having the sleep broken—away from her own people, and subject to all kinds of depressing influences.

Of the medicinal treatment of the disease and its complications I shall speak at my next clinic.

AMPUTATION OF LOWER PART OF THIGH.[1]

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THIS patient has suffered for several years from pain and swelling of the knee, which he has supposed to be rheumatic. Although the knee had already become somewhat stiff, he last year began bicycle riding upon the recommendation of some of his friends. I am not familiar with the therapeutic value of the bicycle; but, in this case, it has proved detrimental, and his trouble has increased so much that he has been forced to seek surgical aid. The case is one of tuberculous arthritis of the knee. One brother died of pulmonary tuberculosis; another brother is in an incipient stage of the same disease; the patient, in addition to the disorganization of the joint-tissues, has the peculiar cachectic appearance indicative of tuberculosis.

I have advised amputation, because the general consensus of professional opinion is that in patients of middle age better results are obtained thereby than from resection. Younger persons often outgrow the tuberculous tendency, or scrofula as it is called by many writers; but in middle life the disease seems to be so thoroughly implanted in the system that it cannot be eliminated except by the removal of the foci of disease. A substitute for amputation is erasion of the joint, in which case the synovial membrane, the articular cartilages, and, perhaps, a small portion of the epiphyses of the bones are removed. This operation is also called arthrectomy, but I think the term erasion is preferable. Another substitute is resection. This, I believe, should be confined to young subjects—that is, children under sixteen years of age.

However, almost any of us would be loath to lose a leg, and I suggested to this patient that, in lieu of amputation, the next best thing would be to open the joint and remove the synovial membrane and such other structures as might seem necessary. Eight months ago I did this operation, and found that the disease was limited to a pulpy degeneration of the synovial membrane. I removed the synovial membrane, the underlying articular cartilages, and the patella. The patient recovered from the operation, the wound healing in a few days, except for a fistula where the drainage-tube had lain. I would add that, if I had to do the operation again, I would not use the rubber drainage-tube, but, in its place, strands of catgut, which will act as a drain long enough, and then will be absorbed. The rubber tube sometimes acts as a seton and delays union.

The real cause of the fistula, however, was that, on account of the strong tuberculous tendency of the patient, the disease was not entirely mastered. Through the summer months he did well, and efforts were made to improve his condition by hypophosphites, cod-liver oil, a hygienic regimen, and out-of-door exercise. Although his general condition improved, he was unable to use the knee; any attempt to put the foot on the floor caused pain, and he was obliged to go about on crutches. A week or two ago the pain became worse, there was more discharge from the fistulous orifice, and I asked Dr. Park to see the case with me in consultation. I had already expressed the opinion that amputation was the only proper course, and in this view Dr. Park concurred.

Various methods of amputation are preferred by different surgeons. Amongst the older surgeons preference was usually given to the flap method, because it was so quickly performed—an important thing in pre-anesthetic days. Since the introduction of anesthetics and antiseptics, and of almost perfect hemostasis, time is not such an important element in estimating an operator's skill. One objection to the flap operation at the lower third of the thigh is that the femoral artery is split by the transfixion knife. The general opinion now is in favor of making what are called skin-flaps, very different from the flaps representing the entire thickness of the limb from skin to bone. The skin-flaps may be made either laterally or antero-posteriorly. In many acute cases of injury calling for amputation, we are limited in our choice of operation by the amount and location of unmutilated skin at our disposal, and we are often forced to make atypical combinations of flaps and to take the theoretically least desirable course in meeting the practical demands of the case.

Owing to the triumphs of antiseptic surgery, however, the necessity of amputation in traumatic cases has been lessened, and such operations are now performed less and less for accidental lacerations of limbs and more and more to remove extensive foci of disease. Hence, we are relatively more able now than formerly to select the exact operation which seems best adapted to the future welfare of the patient. This morning I intend to follow a method introduced by Dr. Stephen Smith, a method which is much in favor at present and which is indorsed by instrument-makers as affording an excellent stump for an artificial limb.

Now that the patient is brought before us, anesthetized, you can see the line of incision that was made for the erasion of which I spoke. The absence of the patella is conspicuous. It is not always removed at such operations; but I thought best to remove it here, on account of the disease-process, which extended into it from the synovial membrane behind. The lower part of the thigh and the leg have been shaved and wrapped in antiseptic towels after thorough disinfection. Many consider that the great care taken to render aseptic the field of operation is a work of supererogation, but one who has had experience in the pre-antiseptic days, as I have, and has compared the methods and results of the past with those of the present, must be convinced that we cannot be too careful in preventing the entrance of septic matter into wounds. In a clean building there is not so much danger of infection, but in a hospital, where many septic cases are presented in clinic, we must take especial care to prevent contamination by pathogenic bacteria.

My first incision is made across the limb in front, drawing the knife upward behind. A second incision is similarly made on the other side, the two meeting posteriorly so as to afford an opportunity for drainage in the most desirable place. The skin and superficial fascia are reflected up for about two inches and held by the retractor. The muscular tissue is now severed to the bone by a circular sweep of the knife. A modifi-

[1] The operation was performed at the Buffalo General Hospital before an audience of physicians and the students of the Medical Department of the University of Buffalo.

cation of this operation was suggested by a brilliant and promising young surgeon in the United States Army, who died of cholera while marching across the plains. I refer to Dr. McGill, son of President McGill, of Princeton University. His method consisted in dividing the bone, grasping it with the lion-jaw forceps, pushing the periosteum up to the level of the muscular incision, sawing the bone a second time at this level, and suturing the periosteal flap over its end. The principal advantage of this procedure is to prevent firm adhesions between the bone end and the cicatrix of the stump. This object can be attained by simply stripping up the periosteum, as I do here, before sawing the bone, and laying the periosteal flaps over the extremity of the femur.

Although I have had the bone held firmly, to prevent splintering by the saw, there are, as usual, a few spiculæ left, which are trimmed away with cutting-forceps. I have left what experience teaches is sufficient periosteum to prevent the adherence of the softer tissues to the bone. We will now loosen the Esmarch ligature a little and search for the vessels. Care must be taken not to include the nerve-trunks with the arteries. Prior to the introduction of antisepsis we had to leave our ligatures long, so that they could be removed when they had sloughed off. Now we cut the ends short and expect the aseptic catgut to be absorbed. We used, also, to avoid tying veins, on account of the danger of phlebitis. Now there is practically no danger of this complication, and here I tie several veins that are bleeding somewhat freely.

I now close the wound with the interrupted catgut suture, introducing a rubber drainage-tube, so that we can irrigate the cavity of the wound without disturbing the dressing, if there is any indication of the need of irrigation. In the absence of tuberculous tissue in the wound, there is no reason to expect a fistulous opening to persist after the removal of the tube. This clean cut through healthy skin and muscle is very different from the erasion of a pulpy, degenerated mass from the interior of the joint, and, although the need of drainage is less imperative here, it is a safeguard that can be employed with almost no fear that the wound will not entirely close. The first effect of a posterior-flap operation is more pleasing than this, but the makers of artificial limbs agree that the Stephen Smith operation gives the best stump in this situation.

HOSPITAL NOTE.

APICAL PNEUMONIA.

Children's Hospital, Philadelphia.

SERVICE OF MORRIS J. LEWIS, M.D.

[Reported by ALFRED HAND, JR., Resident Physician.]

J. S., male, eleven years old, was sent to the hospital as a case of typhoid fever. The family history was negative, except that his mother had died of typhoid pneumonia ten years ago.

The boy had always been well, except for a slight cough a year ago. He had had nose-bleed two weeks before admission, followed by a dull headache; his bowels were inclined to be costive rather than loose. The onset of his sickness was then sudden, four days before admission. He had a chill, pains in the back, arms, and legs, and had vomited. These symptoms, with irritability of the stomach, persisted.

There was a hard, dry cough, and examination showed that there was impaired motion below the right clavicle, with dulness on percussion, increased fremitus, and bronchial breathing down to the third rib. There was tenderness all over the abdomen, especially in the right iliac fossa, and over the liver and spleen, but these organs were not enlarged. The belly was not tympanitic, and there were no spots, but the tongue was coated, the teeth covered with sordes, and the expression of the face that of a profound typhoid state. These phenomena, together with the history, led to the belief that the case was one of developing typhoid fever, complicated with apical pneumonia.

Close watch was kept on the lung-consolidation, and the cold-bath treatment for typhoid fever was instituted. The bathing-temperature was fixed at 103°, with the bath at 80°, and the patient kept immersed until his temperature fell to 101°. Seven baths were given in the first twenty-four hours, five in the second, and five in the third. The effect of these was decidedly beneficial, the delirium, which had only been mild, ceasing, the tongue cleaning, the consolidation not advancing, and the typhoid expression gradually disappearing. The last bath was given just seventy-two hours after admission, when the temperature was 103.4°.

The temperature then fell by rapid lysis, almost by crisis, and was normal by the next morning. A crop of herpes now appeared on the lips. The temperature remained almost normal for five days, and the case was then seen to have been one of typhoid pneumonia, and not of pneumonia with typhoid fever.

Convalescence was interrupted for a day; constipation, which yielded to a saline cathartic, causing moderate fever for a short time. The consolidation resolved slowly, and the lung was clear four weeks after the boy came under observation. He was, however, kept in the hospital on account of the unfavorable surroundings of his home, until he was in robust health. He was discharged six weeks after admission, perfectly well.

The case is instructive in two points: First, as indicating that apical pneumonia in children is not always attended with marked cerebral symptoms, and may exist with almost none; and second, that cold-bathing for the hyperpyrexia of pneumonia may be of decided benefit.

MEDICAL PROGRESS.

The Action of the Epiglottis during Deglutition.—KANTHACK and ANDERSON (*Journal of Physiology*, vol. xiv, Nos. 2 and 3, p. 154), from anatomic observations and experiments on animals and on themselves, have come to the conclusion that in man, goats, dogs, cats, and rabbits, during deglutition under natural conditions, the epiglottis descends over the aditus laryngis, closing it after the manner of a lid. This lid-like action of the epiglottis is one of the mechanisms intended to protect the respiratory tract during deglutition; it is not absolutely necessary, as in man and some other animals the aditus laryngis and the superior glottis close during the

act; the glottis proper closes; the laryngeal mucous membrane is extremely sensitive; respiration ceases during the act of deglutition; and in some animals the base of the tongue may replace the epiglottis, the aditus laryngis being pulled up and firmly pressed against the tongue.

Esophagotomy in a Child.—ALEXANDROW (*Bolnitschnaja Gazeta Botkina*, 1891, No. 24; *Jahrb. f. Kinderheilk.*, B. xxxv, 3, p. 255) has reported the case of a boy who swallowed a large button and was thereafter unable to swallow solid food. Brought to the hospital after three days, an olive-tipped bougie encountered an impassable obstruction at a distance of 4.6 inches from the dental margin. On the seventh day an incision, a little more than an inch long, was made at the level of the sterno-clavicular articulation along the internal border of the sternal head of the sterno-mastoid muscle. After division of the aponeurosis the muscle and the vessels were displaced externally, the sterno-thyroid muscle and the larynx internally. The esophagus was exposed and incised and the button, 0.8 inch in diameter, removed. The hemorrhage was slight. The wound was irrigated with boric acid and drainage provided for. The patient was dismissed, cured, after the lapse of about a month.

The Bacteria of the Intestinal Tract.—GILBERT and LION (*Compt.-rend. hebdom. des Séances de la Soc. de Biol.*, sér. ix, t. v, No. 11, p. 55) have made a study of the bacteria that infest the intestinal tract, and have found that there exist a number of kinds that have hitherto been included in the generic designation of bacterium coli commune. Further investigation is necessary to determine the differential features of these various types, and to determine if there are distinct species or different varieties of the same species. In the description of these organisms it is important to precisely describe their characteristics. If the name bacterium coli commune is employed, it should be qualified by a statement as to the motility of the organism; its action upon gelatin, the character of the culture upon potatoes, its behavior in the presence of lactose, its action upon milk, and its reaction with indol.

THERAPEUTIC NOTES.

The Treatment of Syphilis by Means of Hypodermatic Injections of Mercury.—In an elaborate paper recently presented to the Philadelphia County Medical Society, J. WILLIAM WHITE maintained that the hypodermatic treatment of syphilis has not as yet yielded results that warrant its adoption as a routine method, to the exclusion of or in preference to other methods; on the contrary, it has some apparently insuperable disadvantages and even dangers that render it improbable that it ever will be so adopted.

Hypodermatic medication will find application in those cases in which other methods of treatment have been tried and failed; in those in which, owing to idiosyncrasy or intercurrent disease, the skin and the digestive tract cannot be used for the introduction of mercury; in those in which, owing to grave and advancing lesions, rapid mercurialization is absolutely necessary; in those in which obstinate localized lesions can be thus most directly reached; possibly in those in which early differentiation between syphilis and malignant disease, or tuberculous ulceration, is extremely important. The subcutaneous injection of mercurials may find practical application in shortening the period of doubt that often intervenes between the appearance of the primary sore and the development of general adenopathy or of the exanthemata. In the great majority of cases the soluble salts are to be preferred to the insoluble, as more exact in the matter of dosage and much less dangerous and less likely to be followed by local disturbances. They are always to be used when there is need for rapid mercurialization.

The insoluble salts should probably be reserved for cases in which frequent visits to the surgeon are impossible and in which no contra-indication exists. In cases of renal disease, diabetes, profound anemia, marked atheroma, great debility, etc., the method is dangerous.

Of the soluble salts the bichlorid is probably to be preferred. The results from its use are not strikingly different from those obtained from the other compounds of this class, but its stability and great solubility, as well as its germicidal qualities, seem to warrant its selection. It has the disadvantage of causing pain, but each of the salts on the list produces a considerable amount of pain and a not inconsiderable number of accidents or complications. The bichlorid probably is freer from objectionable features, in respect especially to the occurrence of suppuration, than any other salt of mercury.

Among the insoluble salts calomel and the yellow oxid are to be preferred. It would appear that the latter is a little less active, but at the same time much less irritating. Gray oil is the most available form in which to administer metallic mercury.

The Employment of Sodium Salicylate by Enema in the Treatment of Articular Rheumatism.—As a result of the employment of sodium salicylate by enema in the treatment of fifteen cases of acute articular rheumatism, seven of chronic articular rheumatism, one of pneumonia, one of puerperal septicemia, and in a healthy individual, ERLANGER (*Archiv für klin. Medicin.*, B. v, H. 2 u. 3, p. 303) recommends this method of medication in all cases in which the salicylates, though indicated, cannot, for one reason or another, be taken by the mouth. It is essential, in order that absorption take place, that, if the bowels have not been spontaneously moved, a preparatory enema of water be given to clean out the lower bowel. The medicated enema should contain from a dram and a half to two drams of sodium salicylate, with half a dram of tincture of opium and three ounces of water. It should be warm and is best administered in one dose. The nozzle of the syringe should be introduced into the bowel for a distance of about eight inches. The patient is to be instructed that the enema is to be retained and not expelled.

For Migraine.—

℞.—Butyl-chloral hydrat. . . . . gr. xv.
Tinct. cannabis indicæ . . . . ♏xv.
Tinct. gelsemii . . . . . ♏xxx.
Glycerin. . . . . ʒiv.
Aquæ . . . . . ad ʒiij.—M.

S.—An ounce to be taken at once; to be repeated in half an hour. *Practitioner*, No. 298, vol. l, No. iv.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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SATURDAY, MAY 20, 1893.

BIOLOGIC THERAPEUTICS.

THE practical application of a method of therapeutics that THE NEWS has chosen to designate biologic seems to be gradually but progressively extending. We feel that the principle upon which the mode of treatment is based has been sufficiently well established to receive earnest attention and careful consideration. It is true that we may not, at present, be in a position to give an adequate explanation of the mode of action, so that for the time being we must be satisfied with the empiric demonstration.

There can be no question as to the accuracy of the observation that the products of bacillary activity, under certain conditions, exercise a curative influence upon the disease with which the particular organism is etiologically associated. This question is one that is indissolubly associated with that of immunity. The best example of this relation is furnished by pneumonia and its antitoxin. Tuberculosis and tuberculin afford another instance; and cholera, the most recent.

There can certainly be none that will question the utility of the thyroid gland in some form in the treatment of myxedema. In spite of the distrust with which the method of treatment of BROWN-SÉQUARD has been received and the ridicule that has been heaped upon it, the fact remains that unless we can no longer believe reputable men, results little short of marvellous have been obtained, not by a single observer, but by many. It is yet too early to express a conclusive opinion as to the method of HAMMOND.

In the line of this thought it is interesting to read a remarkable communication by MACALISTER in the *British Medical Journal*, No. 1684, p. 729. Having been struck by what appeared, in two cases, to be a direct connection between the removal of the uterine appendages and the development of osteo-arthritis, the possibility occurred to him that something had been removed which was essential to the integrity of the articular structures. Inquiring carefully into the histories of a number of cases of osteo-arthritis in women, he found that almost without exception there had been some disorder of uterine or ovarian function before the appearance of the articular disease.

Pursuing his studies further, MACALISTER formulated the hypothesis that the glandular structures of the body elaborate substances that exert a controlling influence over the growth of individual tissues, and in those diseased conditions in which hyperplasia or hypoplasia of a single tissue-element takes place, there is an absence or perversion of the secretion that physiologically controls the growth of that particular constituent.

The opportunity of putting the theory to a clinical test was furnished by a case of pseudo-hypertrophic paralysis. The occurrence of the disease almost invariably in childhood suggested the thought that it might be due to the premature cessation of some secretion which, during early life, possibly exercises an inhibitory influence upon the production of the fibrous parts of the muscles. The thymus gland was naturally at once thought of, the functional activity of which coincides with the age-limits of the commencement of pseudo-hypertrophic paralysis. In the case of a child of fourteen, with typical symptoms of pseudo-hypertrophic paralysis of five years' standing, encouraging results followed the daily administration, for one month, of a thymus gland minced and incorporated with gelatin and taken in two equal parts night and morning.

In a second case, one of lymphadenoma, in a man of sixty-two, in which a fatal issue was anticipated, a dessertspoonful of a mixture of red and yellow marrow, mixed with glycerin and incorporated with

gelatin, was administered thrice daily. The quantity of urine was increased from twelve or fourteen ounces to a quart, and the general condition was appreciably improved.

In regard to the treatment of myxedema by means of products of the thyroid gland, the explanation is offered that the absence of the thyroid secretion entails the development of a condition in which there is an excess of mucin (the normal predecessor of ordinary connective tissue), not only in the subcutaneous tissues, but also in many other connective tissues. The natural inference is that in health the thyroid gland adds something to the blood that controls the growth of mucin.

DIPHTHERIA WITHOUT MEMBRANE.

THERE has long been reason to believe that diphtheria may exist in the absence of membrane-formation. Thus, it is not uncommon in times of epidemic to encounter, in families of which one member has had diphtheria, cases of simple angina, of which the true nature is made evident by the transference to others of virulent diphtheric infection. At times, too, nephritis and the palsy characteristic of diphtheria have been observed in the sequence of an attack of apparently simple catarrhal angina. It has, also, occasionally happened that of two persons who have cleared by suction a tracheotomy-canula used in a case croup, one has developed typical diphtheria, while the other suffered only from an ordinary febrile angina. Of course, it is possible that in all of these various instances membrane has been present, but has disappeared, or is present but situated out of the range of observation. The confirmation of the natural inferences from the circumstantial evidence remained incomplete and inconclusive until the discovery of the bacillus of diphtheria by LOEFFLER, and the demonstration of its etiologic relation.

It has been shown beyond peradventure of doubt that many cases of croup are of diphtheric origin; while in the angina of scalatina, and in most cases of simple and lacunar and follicular angina, as well as in many cases that cannot clinically be distinguished from cases of diphtheria of the pharynx and air-passages and from genuine croup, diphtheria-bacilli cannot be found. The bacillus of diphtheria has but rarely been found in the oral cavity of perfectly healthy individuals, and of persons suffering with catarrhal angina.

FEER (*Corresp.-blatt für Schweizer Aerzte*, Jahrg. xxiii, No. 8, p. 295) has recorded the results of an interesting study that have an important bearing in this connection. His study includes forty cases of bacillary diphtheria, five cases of membranous angina dependent upon the presence of micrococci, and numerous cases of simple and follicular angina. He reports in detail a house-epidemic, in which, in the course of two months, there occurred in the Children's Hospital at Basle, at a time when diphtheria was not especially prevalent in the city, eight cases in which membrane formed in the larynx or pharynx, or in both. In six of these diphtheria-bacilli were found; in the remaining two only micrococci. Of the former, four died; all of the others recovered. In the further course of events, virulent diphtheria-bacilli, in the total absence of deposit, were found upon the tonsils of three children that occupied a room that had previously been occupied by three other children suffering from genuine diphtheria. Two of the children displayed manifestations of febrile catarrhal angina, with enlargement of the cervical glands. One presented neither local nor constitutional manifestations.

These observations indicate that we have yet considerable to learn concerning the clinical recognition of diphtheria, while their practical outcome leads to the treatment of mild and doubtful cases in times of epidemic on the same lines as that of the most virulent.

EDITORIAL COMMENTS.

Leprosy in India.—*The British Medical Journal*, No. 1687, p. 919, presents an abstract of the report prepared by a Commission which spent twelve months in India studying leprosy. It was not found that the disease is more prevalent on the seacoast, in riparian areas, or in large valleys than elsewhere. All tracts are invaded more or less impartially, and, as far as surface-relations are concerned, no generalizations could be made. No relation could be traced between the geologic formation of an area and the density of the leprous population. It is shown not only that leprosy has not increased in British India, but that the figures suggest a decrease. There seemed to be some connection, accidental or otherwise, between the dampness of the climate and the prevalence of leprosy, though not between heat and the distribution of the disease, nor between the increase or decrease or the density of the population and the leper ratios. The disease was especially prevalent where cholera was endemic. There was some evidence that leprosy is most prevalent in the most poverty-stricken districts. Considerable importance is attached to unsanitary surroundings, unfavorable social conditions and the like as etiologic factors, the removal or improvement of which is an important prophylactic measure. The disease was found to affect all ethnic elements, but severally

to a different degree. The native element is most prone and the unmixed European least. The difference is to be ascribed solely to the inequality of social conditions. It was not found that vaccination had the slighest influence upon the prevalence or increase of the disease.

The Commission arrived at the conclusion that leprosy in India cannot be considered an hereditary disease and that the evidence is hardly sufficient to establish to any appreciable degree an hereditary specific predisposition to the disease by the offspring of leprous parents. Leprosy is by the Commission believed to be an infective disease, caused by the bacillus lepræ, but not necessarily contagious. The theory is rejected that mosquitoes and other insects may be responsible for the diffusion of the disease. The same view is held with regard to the eating of fish. The cost of salt is so small that there is no basis for the claim that the disease has been increased by deprivation of salt. The disease was not found sufficiently diffused to warrant a belief in a connection between water and the spread of leprosy. No support was found for the view that leprosy bears any relation to syphilis.

The Commission considers leprosy an incurable disease, although it is admitted that by proper attention to the hygienic surroundings much may be done to ameliorate the condition of the sufferers, and to this end the establishment of voluntary asylums throughout India is recommended. Drugs and oils are but palliative. Any oil thoroughly rubbed into the skin will afford some relief, but a specific action belongs to none. Arsenic is perhaps the most valuable drug at present known for the palliative treatment of the disease. Nerve-stretching may be resorted to as a valuable aid to relieve pain, and excision of tubercles is occasionally followed by temporary good results. In cases of perforating ulcer free incisions down to the bone afford great relief and yield good results. Bronchotomy and ophthalmic operations should be performed as occasion requires; in fact, no treatment sanctioned by the principles and laws of surgery need be refused.

The Horse-leech as a Human Parasite.—It is stated by the *British Medical Journal* that in Southern Europe and in Northern Africa the hemopis, or horse-leech, in an immature condition, inadvertently swallowed with drinking-water, not infrequently attaches itself to the mucous membrane of the naso-pharynx of man, as well as of other animals. Occasionally the parasites attach themselves to the rima glottidis, or even pass into the larynx and upper part of the trachea, giving rise to irritation and discomfort, and also imperilling life. Once firmly established, the horse-leech is rarely expelled spontaneously. If inhalation of tobacco-smoke, saline applications, or administration of turpentine, fail to dislodge the parasite, its removal with the forceps (with the aid of the laryngoscope) should be attempted. The inhalation of chloroform is said sometimes to cause it to abandon its hold; but if in or near the larynx this procedure might prove dangerous, as the parasite might be inspired into the air-passages. Should simpler measures fail, in case the leech be fixed above the glottis or immediately beneath the vocal bands, crico-thyroid laryngotomy may become necessary; and tracheotomy, if the leech be situated at a lower level. For purposes of anesthesia cocaine is to be preferred. When the air-passages have been opened the gentle injection through a catheter of a solution of salt will cause the parasite to relax its grasp. The thyroid cartilage should be slit open only as last resort.

"Brains and Money" in Medical Education.—Our esteemed contemporary, *The Post-Graduate*, says most wisely:

"Medical colleges have for too long had the power to determine who shall and who shall not practise medicine. Like other institutions that have wielded sway uninterruptedly and unquestioned, they have sometimes become careless in their methods. Many of these medical colleges have gone on year after year, giving licenses to practise to men who were almost totally unable to converse and write properly in the English language. And so far as intimate acquaintanceship with medicine as a science was concerned, they were as ignorant of it as a child. The fact that an individual is able to have crammed into him sufficient knowledge to pass a college examination, in no way determines his fitness to assume the study of medicine."

But after thus excellently stating a truth, our contemporary proceeds to sneer ungracefully and untruthfully at the poor young man who "scrapes his way" through college, and more or less plainly implies that poverty is inconsistent with a good quality either of student-character or of the life of the practising physician. We would urge that neither this praised conjunction of "brains and money," nor the scorned correlation of poverty of purse with poverty of medical ability are either necessary or even common correlations. When the medical profession sneers at lack of money in its members, and makes it impossible for poor young men to enter and honor it—then will medicine deservedly be a far less honorable profession than it is to-day.

The Treatment of Disease without Alcohol.—One of the most accomplished, as well as most philosophic and most original, of living physicians is BENJAMIN WARD RICHARDSON. Any expression of opinion or any announcent of practice from his pen must, therefore, be received with the most respectful consideration. He retired from hospital practice in the year 1867, but in the spring of 1892 he received an invitation to become physician to the London Temperance Hospital, which, in his own language, "was so much to my taste, and the mode in which it came to me was so handsomely conceived, that I could not help availing myself of it."[1] Left free to prescribe alcohol medicinally in such cases and at such times as he saw fit, he treated two hundred successive cases, of a wide range of formidable diseases affecting various classes of persons, without the use of alcohol in a single case. Glycerin was employed in the preparation of tinctures, and a series of waters (aqua ferri, aqua chloroformi, aqua opii, etc.) was devised to form the menstrua of other active drugs that might be required. So successful have been the results, that it is concluded that they could not have been bettered by any aid that could have been derived from alcoholic stimulants.

One Method of Launching a New Medical Magazine is as follows: Print a facsimile of the cover as it is desired to be, several months in advance, putting on it as collab-

[1] The Asclepiad, First Quarter, 1893, No. 37, vol. x, p. 1.

orators the names of twenty or thirty of the greatest surgeons, gynecologists, and obstetricians in America and England. Then write a letter to each of the "collaborators," as follows:

"Some time ago I begun (*sic !*) the formation of a staff of representative American surgeons and gynecologists with reference to beginning the publication of a high class journal as per (*sic !*) enclosed cover page. I wrote you for your coöperation in the work, but for some cause have not yet received your reply. However, being anxious to get out a limited number of copies of the cover to send to the advertisers, I allowed your name to remain," etc.

A large proportion of those thus invited never received the mythical first letter, because it was never sent. Some "finding themselves in such good company," consented to let their names remain; others saw through the trick and refused to become "collaborators." The journal will doubtless succeed!

The New York State Reformatory.—We last year urged our readers to note the work of the New York State Reformatory, an institution which has become the model of its kind throughout the civilized world. The seventeenth *Year-book* has just been issued, and we wish to renew our note of praise and satisfaction in reading the record of work done. If the purest delight possible is that of practical success in the reformation, physical, mental, and moral, of those who have unfortunately got a wrong start in life, then must the officers of the Reformatory be happy men, and while this noble pride speaks from every page of the book—beautiful artistically as well as ethically—one can plainly see that not sentiment alone, but a strict gauging of the limits and uses of sentiment is as evident everywhere. There is seldom more interesting reading offered the psychologist, moralist, and physician than the biographies, with portraits, of one hundred of the young men. "Reformation must be the great object of penal legislation, both as a matter of prudence and a matter of justice, as a necessity and a debt, for the protection of society and the satisfaction of the rights of the individual."

The "School of Anesthesia, with Annex."—An illustration of the strange uses of language, as well as illustrations of several other interesting things, is given in a circular before us, emanating from Chicago. A considerable Faculty is listed of a proposed "School of Anesthesia," with the titles of M.D., A.M., D.D.S., and M.S.A., but, strange to say, no D.D.'s or LL.D.'s appear there. "Anesthesia" is repeatedly defined as hypnotism, but some little place is left for the kind of anesthesia physicians and dentists have usually in mind in their use of the word. It is even conceded that there is an "importance in using both the internal hypnotic, or mind, with the external hypnotic, or narcotic, in coöperation in producing hypnotism." "M.S.A." is the new degree conferred, for which the fee is $100, and, in writing, one may address either the secretary of the school or a certain "Dental and Surgical M'f'g Co." The "annex" relates to instruction in prosthetic dentistry.

The Spelling of "Symphysiotomy."—A learned and courteous critic, contending with valor and right that we should guard the well-spring of medical English undefiled, timorously suggested that *symphyseotomy* is the proper way of spelling the word. In the phraseology of the suggestion there was no shade of hauteur or contempt for others who, groping in dense ignorance, dared to spell the word *symphysiotomy*. Reference to an unimpeachable authority was made against the plebeians and philologic barbarians. With genuine learning and true courtesy the authority appealed to denies the validity of the logic of the *symphyseotomist*—a logic that it might have been remarked would necessitate a radical change in the spelling of a thousand or more accepted medical words. We judge that the barbarians may still write *symphysiotomy*, if they desire, and that *tracheology* and *tracheologist* are formations also little creditable to philologic umpires.

Dr. Tryon, Surgeon-General of the Navy.—The appointment of Dr. Tryon as the successor of Surgeon-General Brown, who went on the retired list May 10th, was made over the heads of several worthy officers who were his seniors. Dr. Tryon's long, varied, and excellent services in the Navy for over thirty years, and his characteristic energy and executive ability, all give ground for the assurance that this department of the public service will soon be advanced to the position of usefulness and effectiveness that it should hold. It may be made a great helper in the cause of general medicine and science, and those acquainted with the new chief assure us of his fitness and determination to realize the needed reorganization.

A Daily Medical Journal, so says the *National Medical Review*, is published in Washington, D. C., and is called the *Washington Post*. It is supposed to be a common newspaper, but the proportion of space devoted to advertisements of sure cures for gonorrhea, "small and weak organs enlarged," pennyroyal and tansy pills, cures of "errors and indiscretions of youth," etc., leads our contemporary to class the *Post* as "medical."

Smallpox Epidemic at Antwerp.—The Treasury Department has been informed through the Marine-Hospital Service that smallpox is epidemic at Antwerp. Such an event is in the highest degree culpable, if not criminal, for of all preventable diseases smallpox is probably the most certainly preventable.

SELECTIONS.

THE PRACTICE OF MIDWIFERY IN NEW YORK.

MANY of our readers, even those living in New York, will no doubt be surprised to learn that the practice of midwifery in this State is free to any person, male or female, who will take the trouble to have his or her name registered, and pay a fee of fifty cents. A physician cannot prescribe for a baby with colic, and a pharmacist cannot put up the prescription, unless the one has given satisfactory proof of his fitness to treat disease, and the other to compound medicines. But the perilous passage

of the infant from its mother's womb to the outside world, perilous alike to the mother and to the child, may be intrusted to the guidance of any old crone or ignorant beldam who thinks she can make a better living in this manner than by scrubbing floors or selling apples on the street corner. When we read that nearly one-half of the registered births in this city are reported by midwives, we need no longer be surprised that over 3400 children were stillborn in the year 1891. The wonder is, rather, that there were not 20,000 stillbirths, and we can but admire the midwives for their forbearance in abstaining from meddlesome interference with the beneficent processes of nature.—*The Medical Record.*

STATISTICS OF THE WORK OF THE NEW YORK CITY DISPENSARIES.

	No. of cases reported by dispensaries.	Per cent. of deductions.	Approximate number of individuals.
Supported by the United States:			
Marine Hospital	3,310	15	2,810
Supported by the Municipality:			
Bellevue Dispensary	44,554	35	28,965
Gouverneur Dispensary	25,252	35	16,418
Total	69,806		45,383
Corporate Institutions—independent and general:			
Good Samaritan	95,233	35	61,918
New York	46,482	30	32,538
Vanderbilt Clinic	35,657	25	26,737
DeMilt	30,111	30	21,081
Northwestern	29,963	30	20,975
Northeastern	21,694	30	15,190
Northern	15,549	35	10,899
German Poliklinic	13,491	20	10,793
East Side	10,500	20	8,400
Beth Israel	7,500	30	5,250
Harlem	6,509	20	5,209
West Side, German	3,250	15	2,770
Six of a smaller class	5,148	10	4,638
Total	321,087		226,398
Connected with Hospitals—general:			
Mt. Sinai	31,185	20	24,945
Roosevelt	24,966	20	19,972
New York (with Chambers Street)	19,382	20	15,504
Presbyterian	9,349	15	7,954
Manhattan (Harlem)	2,709	10	2,439
Church	2,000	10	1,800
French	1,808	10	1,628
St. Vincent	674	5	641
Total	92,073		74,883
Eye, Ear, and Throat:			
N.Y. Eye and Ear Infirmary	21,706	10	19,536
Manhattan	14,123	10	12,711
Ophthalmic	13,722	10	12,350
Ophthalmic and Aural	9,003	10	8,103
New Amsterdam	2,025	5	1,924
Harlem	1,540	5	1,465
Metropolitan	1,202	5	1,140
Total	63,321		57,229
Women and Children:			
N. Y. Infirmary for Women and Children	8,425	15	7,165
St. Mary's	2,897	5	2,752
N. Y. Med. Coll. and Hosp. for Women	1,855	5	1,762
Woman's	1,427	5	1,356
St. Andrew's	831	5	790
Babies'	240	...	240
Total	15,675		14,065
Orthopedic:			
Ruptured and Crippled	8,855	3	8,410
Orthopedic	2,197	...	2,197
Total	11,052		10,607
Skin and Cancer:			
New York Skin and Cancer	1,785	10	1,607
Miscellaneous:			
Two Institutions	1,252	5	1,190
Connected with Colleges:			
Post-Graduate	15,832	20	12,662
New York Polyclinic	12,000	25	9,000
University	10,000	25	7,500
Eclectic	4,502	15	3,827
New York Homeopathic	2,500	10	2,250
Total	44,834		35,239
Connected with Churches:			
Trinity	3,291	10	2,962
St. Barnabas Mission	1,000	10	900
Total	4,291		3,862
Grand totals	628,486		472,429
Deduction on account of "rounding"			20,000
Grand totals	628,486		452,429

—*New York Evening Post.*

REVIEWS.

A MANUAL OF PRACTICAL MEDICAL AND PHYSIOLOGICAL CHEMISTRY. By CHARLES E. PELLEW, E.M., Demonstrator of Physics and Chemistry in the College of Physicians and Surgeons, N. Y., etc. Pp. 314. New York: D. Appleton & Co., 1892.

THIS Manual is not destined to supplant any of the larger standard text-books on chemistry, to which reference must be made if a more elaborate presentation of medico-chemical methods be desired. Its aim is distinct, and essentially a practical one, namely, the elimination of that which is purely chemical and the grouping of those processes that are eminently medical or physiologic in their application; in other words, it treats of the science of chemistry as pertaining to medicine alone. It is especially adapted to the use of students, for whom it was originally intended, and has evidently been prepared with care. Blank pages have been inserted at convenient intervals, and plates, many of them colored, embellish the work. Special notice should be made of the clinical tests for breast-milk on pages 181 and 185, an important subject that has been largely overlooked in books of this nature, and also of

the tests for gastric juice (pages 220 to 223) which, including those of more recent date, are given in full. We notice that the older mode of spelling—for instance, hæmorrhage and œsophagus—has been retained, and we regret that the smallness of the type should mar, as it certainly does, the usefulness of a book that otherwise is of evident merit.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY. Twenty-second Annual Convention, Denver, June, 1892. Pp. 391. Denver: H. T. Collins, 1892.

THIS interesting volume contains some forty papers upon a wide range of subjects, representing general medicine and surgery, as well as almost all of the special departments. It is especially encouraging to note the attention that is paid to the subject of sanitation. Some of the papers are quite noteworthy, and reflect much credit upon the Society from which they emanate. Limitations of space permit merely the mention of a few.

The address by the President, Dr. Stricker, deals with the consideration of "Fibrosis in the Arrest of Phthisis." "Linear Craniotomy in Microcephalus, with a Report of Two Cases," is the title of a paper by Dr. Parkhill. Dr. McNaught details a study of "Plastic Bronchitis." In a paper on "The Identity of Typhoid Fever and the Severer Forms of Mountain Fever," Dr. Campbell expresses the opinion that mountain fever is not a specific affection, but is usually enteric fever or malarial fever. Dr. Pershing reports a case and discusses "Epileptic Automatism of Speech and Action." Dr. Eskridge makes a notable contribution to the subject of "Retro-anterograde Amnesia, with a Report of Two Cases." Dr. John M. Keating contributes a paper entitled "Some Practical Points in the Therapeutics of the Diseases of Women."

THE RETROSPECT OF MEDICINE. A HALF-YEARLY JOURNAL. Edited by JAMES BRAITHWAITE, M.D. Lond. Vol. CVI. July–December, 1892. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited.

WITH this volume, Braithwaite's *Retrospect* completes its fifty-third year of medical usefulness. As in former numbers, a careful selection has been made from the immense mass of the world's medical literature for the closing months of 1892, and while many truly valuable contributions have been necessarily either entirely omitted or extremely curtailed, that which has found entrance is of sterling worth. The editor deserves commendation for the able manner in which he has discharged the onerous duties imposed upon him. Every department of the medical sciences has been allotted space, and no effort have been omitted to maintain the high standard of the journal and the enviable position which it enjoys in the estimation of the medical profession at home and abroad.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA. Thirty-ninth Annual Session, held at Wilmington, N. C. Wilmington, N. C.: Jackson & Bell, 1892.

THIS volume is the record of a most successful meeting of the society from which it emanates. In addition to the President's Address and a partial synopsis of the report of the Secretary of the State Board of Health, the late Dr. Thomas F. Wood, it contains some sixteen or seventeen papers of varying merit and interest, including reports in the different departments of medicine and surgery, besides other information of interest to those more directly concerned. The Society demonstrates its dignity by the expulsion of a member for advertising and administering a nostrum in the treatment of alcoholism.

THE YEAR-BOOK OF TREATMENT FOR 1893 (Lea Brothers & Co., Philadelphia) easily holds its advanced place among the many annuals and abstracts forming so marked a feature of modern medical literature. Its 488 pages give a critical and well-arranged review of the best that the year has brought forth in all departments of therapeutics. Among so much that is excellent one can scarcely choose, yet a word of special praise must be said for Mitchell Bruce's article on the Heart and Circulation, and for that of A. E. Garrod on Gout and Rheumatism. Commendable features are the "Summary of Therapeutics of 1891–92," by W. G. Smith, and the selected list of new books. There is, as usual, a good index.

SOCIETY PROCEEDINGS.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Forty-third Annual Session, held at Williamsport, May 16, 17, and 18, 1893.

FIRST DAY—MAY 16TH.

THE proceedings were opened with prayer. "Addresses of Welcome" were delivered by MAYOR ELLIOT and DR. H. G. MCCORMICK.

The Committee on Contagious Ophthalmia reported progress and emphasized the need of action to prevent the spread of the disease. It was agreed that galley-proofs of the papers read before the Society should be sent to certain journals selected by the Committee on Publication.

An amendment to the rules requiring the arrangement of papers on the program so as to group kindred subjects on each day was offered and laid over for one year.

The amendment offered last year, providing for a Committee on Scientific Business to aid the Committee of Arrangement in providing for scientific papers and discussions, was adopted.

At the afternoon session, DR. S. W. LATTA, of Philadelphia, read the "ADDRESS IN MEDICINE." He expressed the belief that no man should engage in a specialty until he had spent ten years in general practice. He would thus become self-reliant, thoughtful, charitable, and careful of the feelings of others. Otherwise he is likely to be narrow in his views. The tendency among young men to at once enter upon a specialty, without the experience to be obtained by general practice, was deplored. Under these circumstances the specialist is too often compelled to relegate his patient to a general practitioner to determine the nature of his ailment. The physician should study drugs and their uses. He should dispense his own remedies, so that he may know what is given. He is too often ignorant of the laws of hygiene.

It is indispensable that he should be familiar with plumbing, the disposal of garbage, water-supply and its contaminations, and disinfection. The duty of the physician is not only to cure, but also to prevent disease.

The views enunciated were indorsed by DR. J. L. ZIEGLER, of Mount Joy, and DR. J. M. BATTEN, of Pittsburg, who, however, did not assent to the dispensing of drugs.

DR. A. KOENIG, of Pittsburg, also objected to the physician dispensing drugs, unless in the country.

DR. W. S. FOSTER, of Pittsburg, admitted the wisdom of the physician supplying the drugs prescribed, as smaller quantities could be dispensed and changes made as often as required.

In closing the discussion, DR. LATTA stated that forty well-selected articles of the materia medica would answer for quite every emergency.

Upon motion of DR. W. M. WEIDMAN, of Reading, the courtesies of the meeting were extended to the physicians of Williamsport.

DR. EDWARD JACKSON read a paper entitled "When Cataract is Ready for Operation," in the course of which he pointed out that there are two kinds of maturity to be recognized with reference to cataract. The one, visual maturity, is reached when the interference with vision is sufficient to demand operation; and the other, surgical maturity, occurs when the physical condition of the lens is such as to be most favorable for its removal. In former times, the extraction of cataract was attended with such serious danger of complete loss of the eye that the question of surgical maturity was a most important one, the operation only being justified when it offered the greatest possible chance of success. With improvement in surgical methods, including the avoidance of septic panophthalmitis, the chances of a satisfactory result from operation have been greatly increased, while new procedures have enabled the surgeon to render cataracts surgically mature, or to extract successfully those that are still immature. These changes make it possible to perform the operation at an earlier date, and thus avoid a long period of comparative blindness, entailing idleness and dependence and reacting unfavorably on the patient's health.

In the treatment of cataract in young persons, the value of the power of accommodation must be considered; but if the opacity is complete, or sufficient to demand an operation, then the earlier it is resorted to the better, as at an early age the removal of the lens may be accomplished after simple discission, and the more promptly the younger the patient.

In all cases of operation for cataract, an extremely important factor is the condition of the patient's general health, because this will exert a profound influence on the process of healing.

DR. G. B. MASSEY, of Philadelphia, read a paper entitled "Prevalent Errors in the Treatment of Diseases of Women," in which he considered the current errors of gynecologists and the erroneous views of gynecology held by general practitioners. He maintained that the pelvis of woman is not the exclusive domain of the major surgeon. The vaginæ of young girls are torn by the introduction of specula; the cervix is wounded by tenacula; the uterus is dragged down for mere examination; the sound is hastily passed into the uterus; and fierce efforts to elicit pain or detect growths are made by bimanual examination. The finger is better for many purposes, and more intelligent. Displacement is diagnosticated, and some agent is employed to keep the uterus in place. Torture is the result when there is fixation, and often the true plan is to relieve an enlarged uterus. For menorrhalgia dilatation is practised when there is no obstruction, but ovarian congestion, lack of development, etc. A safe and sure remedy is the galvanic current. Again, it is often assumed that lacerations cause the suffering that occurs, when the repair often fails to benefit. Slight lacerations are not incompatible with health, and deep ones, without metritis, only demonstrate their presence by miscarriages.

Many gynecologists still advise dangerous operations to remove benign fibroids, when electricity is the best remedy. The removal of ovaries to arrest the growth of fibroids is unwarranted. The method of Apostoli is more successful. Electricity is not, as deemed by some gynecologists, a cure-all for troubles in women, nor at all useful in the hands of an unskilled operator. General practitioners treat diseases of women more actively than the specialist.

DR. E. E. MONTGOMERY, of Philadelphia, stated that he had never seen a case in which electricity had reduced the size of a fibroid of the uterus, although the application seemed to have a temporary effect on the growth. Patients are rarely able to continue treatment for a year or more; hence to obtain permanent results operation is necessary.

DR. H. A. HARE, of Philadelphia, said that if electricity is capable of removing growths in one part of the body one should expect it to remove them in other parts, but such results are not encountered in the nose, throat, etc.

DR. S. S. TOWLER, of Butler, stated that he has known of the removal of tumors by electricity in a number of cases in which the diagnosis had been made by experts.

DR. T. J. MAYS, of Philadelphia, read a paper entitled "Rest in the Treatment of Pulmonary Consumption." He pointed out that in tuberculosis there was wasting of the whole body. The strength is easily exhausted and energy is not properly distributed. According to his view, the trouble is in the nervous system. The individual is spending too much. The remedy is to check the waste and to build up the body. More air and more food will be required, and exhausting efforts must be interdicted. The therapeutic agent of first importance is rest. The second is food in a concentrated form. After decided improvement there is often relapse, by reason of increased activity.

DR. H. G. MCCORMICK, Chairman of the Committee on Legislation, reported the passage of a law by which none can enter the profession of medicine in Pennsylvania, after July, 1894, unless he has received a common school education, a medical diploma, and has been granted a license by the Medical Council of Pennsylvania, after an examination by the State Board of Medical Examiners. He must have attended three courses of lectures in three different years. After July, 1895, he must have attended four courses. Few, if any, States have a better law, and the public and the profession are to be congratulated.

A vote of thanks was tendered to the Honorable H.

K. Boyer, Charles A. Porter, F. M. Riter, and J. B. Showalter; and to the Committee, which was continued until the bill has been signed by the Governor.

On motion of DR. MONTGOMERY, the report was adopted and the expenses of the Committee ordered to be paid.

DR. W. M. WEIDMAN, of Reading, presented the report of the Committee on Rush Monument. The collections for the year had been $189, making a total of $1356. The Committee was continued.

SECOND DAY, MAY 17TH.

The Nominating Committee presented the following names as the officers for 1894, for whom the Secretary was, on motion, instructed to cast a ballot: President, Dr. H. G. McCormick, of Williamsport; Vice-Presidents, Dr. A. Koenig, of Pittsburg, Dr. S. W. Latta, of Philadelphia, Dr. J. K. Robins, of Columbia, and Dr. S. S. Towler, of Butler; Permanent Secretary, Dr. William B. Atkinson, of Philadelphia; Treasurer, Dr. G. B. Dunmire, of Philadelphia; Assistant Secretary, Dr. Hildegarde H. Longsdorff, of Cumberland; to fill vacancies by expiration of term in the Judicial Council, Drs. M. A. Rhoads, of Berks County, J. H. Packard, of Philadelphia, and John Curwen, of Warren; Chairman of Committee of Arrangements, Dr. E. E. Montgomery, of Philadelphia.

The next meeting is to be held at Gettysburg.

DR. J. W. PARK, of Harrisburg, read the "Address in Laryngology." He urged physical voice-training in the public schools, and dwelt upon the importance of employing the correct method. Instruction should be begun early. Children should early be taught to articulate properly. The pharynx is often injured by want of training. Efforts should be directed to securing the proper pitch. The exercise should never be permitted to induce fatigue. Each child must be decided for separately.

DR. J. M. BALDY, of Philadelphia, read a paper on "Carcinoma," in which he urged the importance of early diagnosis. The only hope in treatment resides in early removal, while the disease is local. Then the patient may recover completely.

Some members maintained that constitutional measures alone sufficed, *e. g.*, Dr. C. R. Earley and Dr. Ridgway, who insisted that arsenic and hemlock had often accomplished a cure, even after an operation had failed.

DR. BALDY, in reply, maintained that the disease was originally local. It is too often not recognized till the time for help has passed.

DR. J. V. SHOEMAKER, of Philadelphia, exhibited a number of new remedies for skin-diseases.

DR. S. AYRES, of Pittsburg, in a paper on "Movable Kidney," stated that the symptoms, general nervousness, cardiac palpitation, inability to sleep on the left side should lead to a thorough examination, as under certain conditions great danger might be liable to result from the presence of a movable kidney.

DR. G. NUTT, of Williamsport, described the operation of intubation in the course of diphtheria, croup, etc., and detailed cases and results.

On motion of DR. P. A. HARTMANN, of Harrisburg, it was resolved that this Society respectfully urges upon the Legislature the importance of enacting a law to prevent the pollution of the streams and inland waters used as sources of domestic water-supply in this State; and that copies of this resolution be sent to the President of the Senate and the Speaker of the House.

In the afternoon DR. S. G. DIXON, of Philadelphia, read the "Address in Hygiene," in which he urged general care, pure air, the need of parks, wide streets, etc., and cleanliness in everything.

DR. M. PRICE, Philadelphia, detailed a case of extra-uterine pregnancy in which operation was performed, with the result of saving mother and child.

DR. J. TYSON read a paper, pointing out that cases are often seen in which the symptoms appear to be those of heart-disease or of kidney-disease, when the reverse condition is present.

DR. J. B. ROBERTS, of Philadelphia, spoke on "Simplicity in the Treatment of Fractures."

DR. H. A. WILSON, of Philadelphia, read a paper on "Suture of the Tendo Achillis," etc., illustrating his remarks in a forcible manner.

DR. W. HOLLOPETER, of Philadelphia, considered the treatment of scarlet fever, including careful bathing, inunction with carbolized oil, etc,

DR. I. N. KERLIN, of Elwyn, reported for the Committee on Provision for Imbecile and Feeble-Minded Children. It is hoped that an appropriation of $250,000 will be made for a building and grounds, etc., in the western part of the State.

The subject of change in, or abolition of, the Code was introduced by DR. J. B. MURDOCH, of Pittsburg. It was, on motion, resolved that this Society opposes any such action, and the delegates were instructed to vote against it.

(To be concluded.)

AMERICAN GYNECOLOGICAL SOCIETY.

Eighteenth Annual Meeting, held at the College of Physicians, Philadelphia, May 16, 17, 18, 1893.

FIRST DAY, MAY 16TH—MORNING SESSION.

DR. W. H. BAKER, of Boston, read a paper on "Congenital Dilatation of the Urethra," in which he detailed several cases. He pointed out the importance of a correct diagnosis. The size of the urethra is usually sufficient to admit the forefinger. In addition there is commonly mal-development of the vagina, which is usually shorter than normal. In one case there had been for ten years partial incontinence of urine. The sphincter was under control while the patient was seated, but not when walking. There was an absence of any burning sensation. The meatus urinarius was abnormally distended, and the mucous membrane of the urethra protruded through it. The mucous membrane of urethra and vagina was extremely thin. It was impossible to tell where the urethra began and the bladder left off. There was no sphincter. An attempt was made to reduce the meatus to a more natural size and to lengthen the urethra. The woman was much better for a time, and it seemed as though a second operation would not be necessary. She still lost a few drops of urine when standing, and faradism was applied one and a half inches from the meatus twice a week for one month, with the hope of strengthening and toning the urethra; but there was but little improvement from this.

Finally an operation was performed for narrowing the urethra; since then the woman has had perfect control over her urine.

DR. PAUL F. MUNDÉ, of New York, read a paper entitled "Abdominal Fistula after Celiotomy; Its Prevention and Treatment." He stated that after the abdomen has been opened, it closes, as a rule, without the development of a fistula. In a large number of cases, however, after apparent union there occurs a discharge of pus; and on examination there is found to be an undermining of the skin. Such an event may occur even when every antiseptic precaution has been taken. Sometimes the fistula will be found to extend deeply into the abdomen, in consequence of the infectious character of the wound, the abdominal cavity at the time of operation being bathed in pus, some of which is left in spite of the greatest care in washing it out. Retained ligatures also sometimes constitute a cause of fistula; after their withdrawal the sinus closes. A few cases are on record in which pieces of gauze, sponges, and instruments have been inadvertently left in the abdominal cavity. Abnormal communications between the abdominal cavity and the vagina are likely to be formed after the removal of the fibroid uterus and the attachment of the cervix to the lower part of the wound; this is one of the objections to the extra-peritoneal method, as sloughing is a necessary consequence.

The measures on which the prevention of these fistulæ is to be based, include absolute antisepsis, the use of animal ligatures, and entire closing of the wound.

The prognosis depends upon the duration of the fistula and the health of the patient. A recent fistula, in a person of fair health, disposes to close spontaneously; whereas an old one, in a broken-down person, persists. Those that manifest a tendency to healthy granulations present the best chances for recovery. Nature occasionally shows a tendency to heal by drainage into the vagina, urethra, or rectum.

The treatment is, first, to remove the cause; if there is any foreign substance in the wound it should be removed. To have the wound heal from the bottom up, it is necessary to scrape it, to irrigate it with a mercurial solution, and to pack it daily. If necessary, balsam of Peru or tincture of calendula (one in four) may be applied daily, to stimulate granulation; a probe at red-heat may also be passed deeply into the canal. When the sinus persists, and extends deeply into the pelvis, so that a probe can be felt in the vagina, an opening may be made and a sufficiently long drainage-tube passed. Daily irrigation with Thiersch's solution should be practised. The tube is retained in place by packing the vagina with iodoform-gauze, which should be changed once or twice a week; in a week or ten days the catgut is absorbed and the upper part of the sinus is closed. The drainage-tube should then be gradually withdrawn, and drainage is obtained without interference with the granulations.

An accident that may occur is the rupture of the wall of the bladder by the withdrawal of the drainage-tube, as a result of the adhesions and the friability of the bladder-wall. In such a case a rubber catheter should be introduced into the bladder.

When the sinus has ramified in several directions, it is not worth while to close one and not the others. One may cut down and treat the wound as an open one; but the operation is attended with danger of wounding the pelvic viscera. As a last expedient, in cases in which the fistula persists, celiotomy may be performed.

DR. GOODELL stated that in his experience fistulæ rarely occurred in simple ovariotomies, but almost always in septic cases. The cases were fewer since he has been using the absorbable ligature. It is wise to remove the whole of a pus-tube. The idea of gradually withdrawing the drainage-tube is admirable. It has been Dr. Goodell's practice to introduce the drainage-tube in the vagina, but not to withdraw it gradually. According to his experience these sinuses occur generally when a drainage-tube is used, and more especially in fat women. They have resulted when a not thoroughly aseptic gut suture has been employed.

DR. NOBLE expressed the opinion that the sinus is not so much the result of the ligature as that some diseased tissue is left. Since adopting the method of removing all diseased tissue, he has had no trouble. He does not believe that it makes much difference which ligature is used.

DR. CURRIER, of New York, expressed the belief that one of the chief causes of fistulæ is the drainage-tube, especially if this be a hard one. The curette, if used at all, should be used gently, or injury of the intestines may result. The use of astringent applications is followed by little benefit, except in those cases in which healing would probably take place spontaneously; but if the fistulæ are sinuous, all of the parts are not touched and the application may do harm by causing granulations to form in front and leaving the lower part of the sinus open. Through drainage is valuable.

DR. DUDLEY stated that fistulæ follow one of three conditions: the presence of pus in the abdomen, not entirely removed at the time of the operation; the use of the drainage-tube; or the infection of the ligature. He always uses the animal ligature, and does not think that there should be a second abdominal section.

DR. EDEBOHLS said that one of the conditions following celiotomy that may cause a fistula is tuberculosis, in consequence of which the intestine may also be perforated and a fecal fistula be established, which may persist for a long time.

DR. CLEVELAND related that he had observed fistulæ due to ligatures, probably as a result of infection before or after the operation. Through-drainage is the best method of treatment. When pus is present the application of hydrogen dioxid has proved useful.

DR. MUNDÉ expressed wonder, not that sinuses occur, but that there are not more of them, especially in cases in which fibroids are enucleated without being seen, and raw surfaces are left.

DR. B. F. BAER, of Philadelphia, read a "Further Report upon Supra-vaginal Hysterectomy by the New Method." He related that he had operated on 18 additional cases since his report of last year, with 1 death. There had been 1 death among the 10 cases first reported, making, thus, 2 in 28; neither was due to the treatment of the pedicle, so that it may be claimed that the mortality was *nil*. The operation is superior to any other for the removal of fibroid tumors of the uterus.

Of all operations supra-vaginal hysterectomy is the least likely to require drainage. Drainage in abdominal

surgery is a delusion. Dr. Baer stated that in 126 cases he had not used the drainage-tube in more than 2 per cent. In one case death took place thirty hours after the operation, from suppression of urine. At the post-mortem examination the kidneys were found greatly enlarged, and the case should not have been operated on at all. Recently, in two cases of senile atrophy, the uterus became carcinomatous. Dr. Baer expressed his conviction of the utility of early operation for uterine fibroids.

DR. GROFF read a paper "On the Development of Operations for the Removal of Fibroids."

DR. CURRIER, of New York, read a paper on "The Treatment of Septicemia with Oxygen."

He defined septicemia as a "toxic, acute mycosis of the blood." When the blood is in a normal state it does not tolerate microörganisms. These organisms have been found in the milk, and it would seem that they enter the blood through the uterus and are secreted in that fluid. The bacterium coli commune has also been found, so that it is possible that septicemia may result from the absorption of material from the intestines. Toxic substances may be derived from decomposing material in the uterus. Germs may be introduced by means of instruments used during an operation.

The symptoms that especially mark the presence of septicemia are referable to the nervous system.

In treatment the natural forces should be sustained by an abundance of concentrated food (milk is, perhaps, the best) and alcohol.

In giving inhalations of oxygen high pressures should not be used, as they have a destructive influence upon the elements of the blood. The amount of pressure necessary must be determined in each case—dark-colored blood and shortness of breath indicating deficiency in oxygen. It cannot be demonstrated that oxygen has any germicidal effect in the blood, but it stimulates to deeper respirations; the extremities and perhaps the entire body become warmer; there is increased tension of the pulse; there is more natural color of the surface of the body, and a stimulation of the blood-current and the respiration are of great importance in the elimination of the toxic elements.

If the inhalation of oxygen is begun before the nervous centers are paralyzed much benefit may be expected. The only ill effect that has been observed is pain in the region of the stomach, probably caused by swallowing some of the oxygen under too great pressure.

DR. MUNDÉ stated that it has been his experience that after the cause of septicemia has been removed it is simply a question as to which will last the longer, the disease or the patient. So far as therapeutic resources are concerned, there is practically little to do but to aid the constitution and try to keep the patient alive. It seems that oxygen is simply an adjuvant to this end.

On the second day the following officers were elected: President, Wm. T. Lusk, of New York; Vice-Presidents, Samuel C. Busey, of Washington, and Bache Emmet, of New York; Treasurer, Matthew D. Mann, of Buffalo; Members of the Council, B. F. Baer, of Philadelphia; James R. Chadwick, of Boston; Clement Cleveland, of Boston, and Edward Reynolds, of Boston.

The next meeting is to be held at Washington, in the last week of May, 1894.

(To be concluded.)

NEWS ITEMS.

The American Climatological Association will hold its Tenth Annual Meeting in the Hall of the College of Physicians, Philadelphia, May 25, 26, and 27, 1893. The following papers have been promised: "Cardiac Dyspnea," by Dr. A. L. Loomis, New York. "Respiratory Mechanism of Wounds in the Chest," by Dr. Andrew H. Smith, New York. "Traumatisms and Chronic Inflammations of the Chest as Causes of Angina Pectoris," by Dr. R. G. Curtin, Philadelphia. "Phlegmonous Angina," by Dr. J. W. Brannan, New York. "A Comparison of the Winter Health-Resorts in the Alps with some places in the Rocky Mountains of Colorado," by Dr. Karl Ruedi, Denver. "A Note on the Relative Values of Therapeutic Methods in Phthisis Pulmonalis," by Dr. G. R. Butler, Brooklyn. "Seasonal Influences in Erysipelas, with Statistics," by Dr. J. M. Anders, Philadelphia. "Health Conditions at St. Augustine," by Dr. F. Fremont Smith, St. Augustine. "Rest in the Treatment of Pulmonary Consumption," by Dr. Thos. J. Mays, Philadelphia. "Report on Results of Treatment at the Adirondack Cottage Sanitarium," by Dr. I. H. Hance, Saranac Lake. "A Contribution to the Treatment of Pulmonary Tuberculosis by Koch's Method. A Supplementary Report of Twenty-five Cases treated Two Years Ago," by Dr. Carl von Ruck, Asheville. "Public Quarantine against Cholera," by Dr. E.O. Shakspeare, Philadelphia. "Recent Agencies in the Treatment of Cholera," by Dr. Judson Daland. Papers have also been promised, but the subjects are not as yet announced, by several, including: Drs. Harrison Allen, J. P. Crozer Griffith, Chas. K. Mills, S. D. Risley, and Edward W. Wattson, of Philadelphia.

The American Laryngological Association will hold its Fifteenth Annual Congress at New York, May 22, 23, and 24, 1893. An interesting program has been arranged. The profession is cordially invited to attend.

Correction.—In the sixth line of the third paragraph of Dr. Gaston's letter in THE NEWS of May 6th, p. 502, the words "those vaccinated" should have read "the non-vaccinated."

Dr. Charles Carroll Lee, President of the Medical Society of the County of New York, died May 10th, in New York City.

Dr. Carl Seiler has resigned the position of Chief of the Nose, Throat, and Ear Service in the Union Mission Hospital.

Kundrat, Professor of Pathologic Anatomy in the University of Vienna, died April 25th, aged forty-eight years.

BOOKS AND PAMPHLETS RECEIVED.

Homeopathy and its Congeners. By G. Frank Lydston, M.D. Pamphlet. Chicago: Fred. Klein & Co., Publishers.

A Consideration of the Knee-jerk Symptom. By R. M. Phelps, A.M., M.D. Reprinted from the Northwestern Lancet, 1892.

Phthisis Bulbi and Artificial Eyes. By William Oliver Moore, M.D. Reprinted from International Clinics, 1892.

Hemianopsia or Hemianopia. By William Oliver Moore, M.D. Reprinted from International Clinics, vol. iii, 2d series.